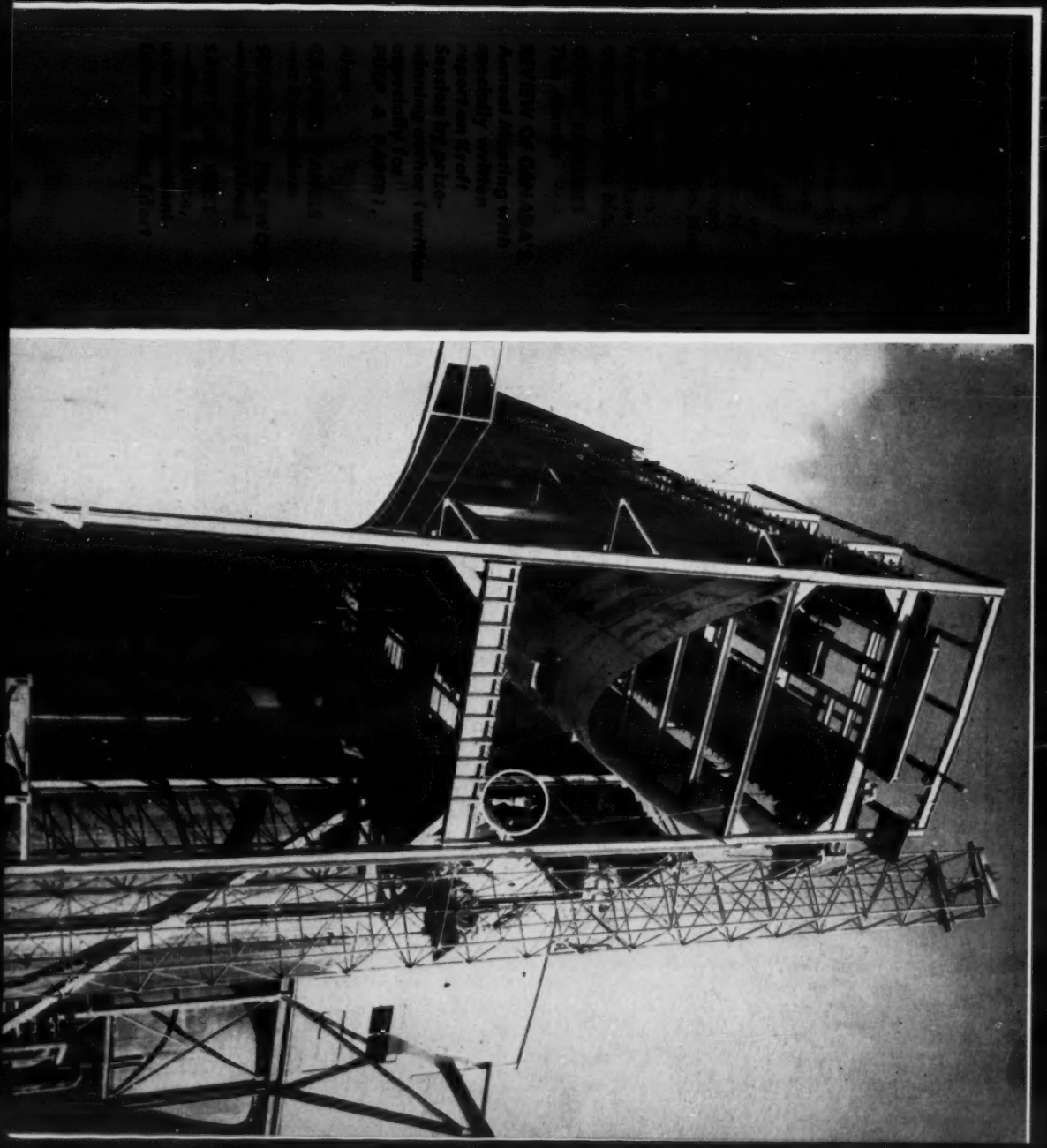
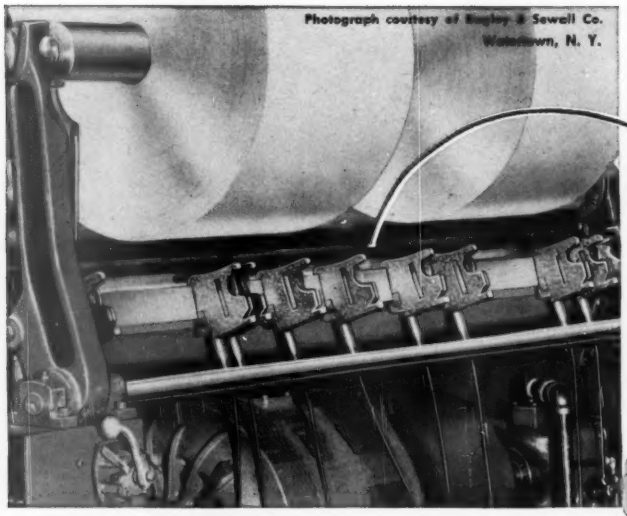
THE PRODUCTION AND MANAGEMENT JOURNAL OF THE NORTH AMERICAN PULP AND PAPER INDUSTRY



PULP & PAPER



Photograph courtesy of Bagley & Sewall Co.
Watertown, N. Y.



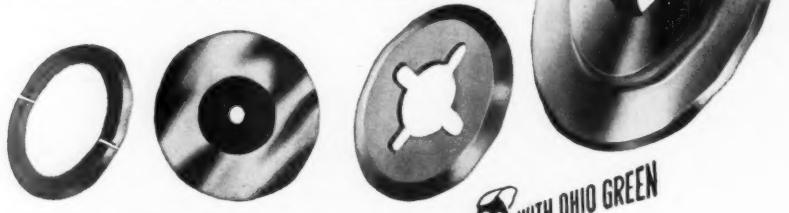
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OK Slitter Knives are made of the finest tool steel . . . scientifically heat-treated . . . ground and finished to tolerances of ± .0001 if required. You can count on fewer regrindings, longer runs with OK Slitter Knives . . . even on your toughest jobs.

OK Slitter Knives are specifically designed for your application. Complete line available in various sizes. Made from Nickel Carbon Alloy, Hi-Speed, Hi-Carbon, Hi-Chrome, and Stainless.

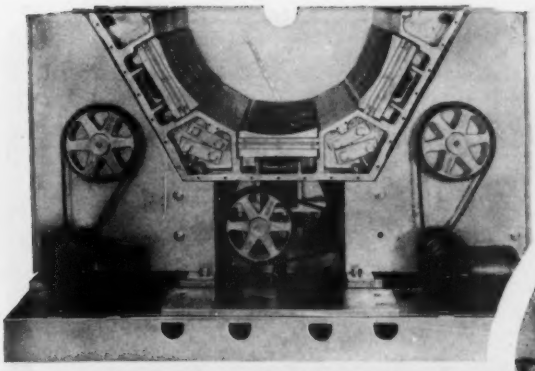
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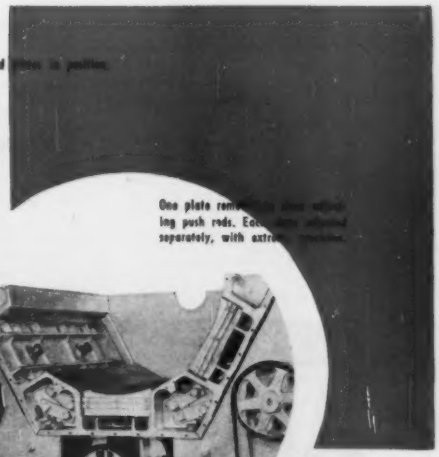


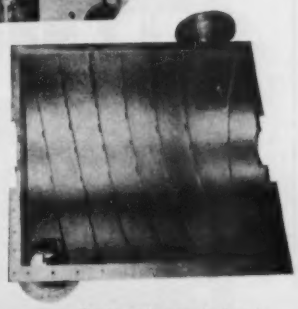
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Showing guide vanes in hood to

THE *Flexibility* OF THE NEW MIDWEST-SMITH BEATER

So flexible is the new Midwest-Smith automatic continuous beater that it will condition a fiber for high density and finish, or for extreme porosity. In other words, the maximum desired mullen, tensile and tear of which the fiber is capable, will be obtained. This is readily apparent once the radically different design features of the Midwest-Smith are understood.

The stock enters on one side under pressure and after a 1 to 3 minute beating cycle discharges on the opposite side. The stock does not immediately spread across the entire face of the roll and bed plates as might be expected. Instead, its path of travel is controlled by spirally positioned vanes in the hood and some eight separate and distinct trips between the roll and bed plates take place as the stock gradually moves from the inlet side to the discharge side.

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Mills running Kraft or semi-chemical pulps—all mills, in fact, should be very much interested in its economy of operation. There is no stock circulation by the roll and there is no bar to bar contact between roll and plates. Consequently, the motor required to drive an average size jordan will drive a Midwest-Smith.

The absence of bar to bar contact means almost indefinite service from one set of roll bars or one set of bed plates. This is in itself a major economy.

Capacity 50 to 100 tons, depending on kind of fiber used, freeness desired and tonnage required.

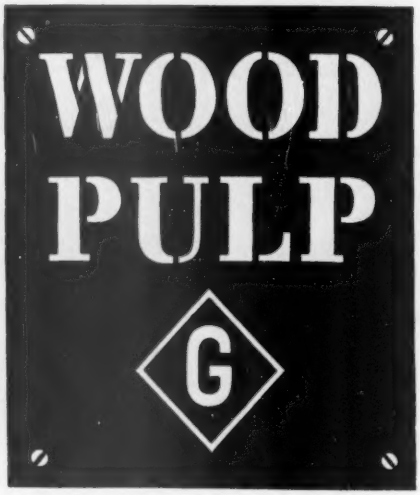
Shipped assembled ready to pipe up, except for drive.

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Established 1886



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ROBERT BROWNING

Constantly envisioning new horizons, Pulp and Paper will assuredly do its part to help America win the continuing vital battle of production. The industry has set important goals for itself and is determined to produce on the scale—and in the progressive manner —that is possible only in a free economy.

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PULP & PAPER
"The Cellulose Age"
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Should Pulp and Paper Mills Be Permitted Observers in Atomic Plants and Institutes?

Is the pulp and paper industry overlooking a golden opportunity of the Atomic Age? Our recent observations in both East and West indicate this is a fair question.

A PULP & PAPER editor traveling to pulp and paper mills in Tennessee and in the foothills of the Great Smokies, recently made a slight detour in order to visit Oak Ridge, to see what news there might be of special interest to our readers. Besides the more publicized activities of the Atomic Energy Commission at Oak Ridge, there are about 200 men there working on production and shipment of isotopes—a by-product of atomic development which the government hopes industry will make greater use of.

At an instrumentation meeting of this industry on the Pacific Coast, a scientist from Hanford Atomic Works at Richland, Wash., told his audience the government was disappointed in the failure of mills to make more use of radioisotopes. We have carried articles and pictures showing their use as tracers in stock over a paper machine at Baie Comeau, Que., to measure thickness or weigh paper in other operations at Continental Paper in New Jersey, Fibreboard in Antioch, Calif., etc., as a means of achieving uniformity. Government spokesmen say isotopes are ideal for studying reactions in chemical pulping; to measure concentrations of wastes in bays and rivers; to locate objects in piping, to measure unseen densities, etc.

But we wonder—seeing these isolated uses in mills—are these the really important opportunities for this industry? Are pulp and paper industries missing a good bet by *not* assigning a few of their own bright young men to study Atomic Energy developments?

After visiting Oak Ridge, Tenn., listening to the nucleonics speaker at Olympia, Wash., we are convinced any pulp and paper company could easily get clearance from the FBI to send one of their men around to government plants and research labs and see what atomic developments might have application or bearing on the progress of this industry.

Would it pay a big mill or company to devote the salary and travel expense of one man to this purpose? We say big companies, only because it would seem a trivial expense to them—salary and travel of one man, that's all.

Our impression is that a paper company could easily get clearance for a man to visit many unclassified operations and departments, at least, at Oak Ridge, Hanford, etc. He could certainly visit the National Laboratory in Brookhaven, Long Island; also the Institutes of Metals, Chemistry, Physics and Biology at the University of Chicago—all engaged in Atomic Energy work. What he learns might be far more important than beta ray gauges.

If the government really wants industry to benefit from this work, why shouldn't the government take steps to invite and welcome these industry representatives as observers and students? We think it takes a man who knows pulp and paper to visualize the limits and the potentialities of Atomic developments for his own industry.

Rayon Magazine Supports Editorial

Commenting on our editorial "The New South," January PULP & PAPER, which pointed out how the dissolving woodpulp and synthetic fiber industries in the South were serving textile plants and tire cord plants in competition with the South's historic King Cotton, and criticizing Southern Cotton senators who discriminated against the new industries in doing favors for cotton as they have done for 150 years or more, we have support from *Rayon and Synthetic Textiles*, a monthly magazine published by Rayon Publishing Corp., New York. Its editor, Jerome Campbell, writes:

"We are in hearty agreement with what you say. We feel it is extremely shortsighted for any group to try to block the growth of the dynamic synthetic fibers industry. Certainly, the residents of the Southern states should be grateful that the chemical fibers industry has chosen that area as the location of so many of its new plants."

An Authoritative Compliment

"We would like to convey our compliments for the fine appearance of PULP & PAPER. We like its format, the quality of its printing and your editorial approach."—*Charles H. Davis, Advertising Management, Boston, Mass.*

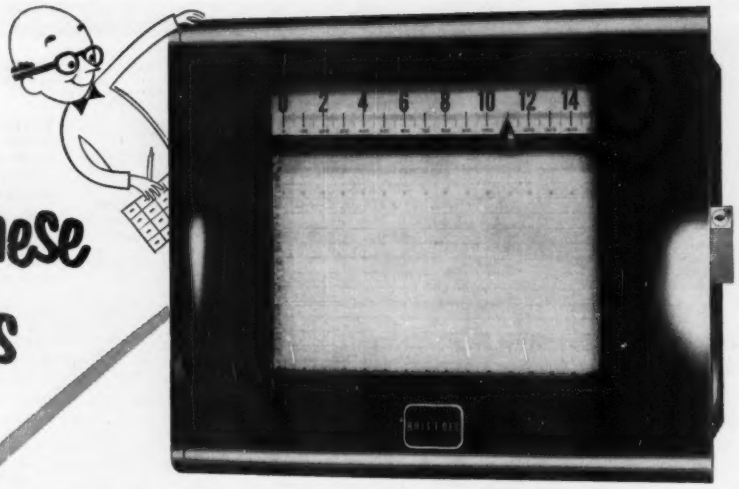
IN THIS ISSUE:

UNION BAG & PAPER'S Engineering 40
Southern News 43
Crown Z Promotions 44
CANADIAN ANNUAL—Meeting Review 48
Rayonier Plans 50
LABOR-MANAGEMENT Safety Meeting 53
GRAPHIC PANELS 64
Radioisotopes 72
New Paper Use 76
CANADA KRAFT Session by G. G. Sutoane 82
West Linn Sawmill 84
Equip't & Supply Cos. 94
MACHINETENDER Munchausen Story 101
PULPWOOD SECTION—South Problems 88
SPCA Meeting 88
South Outlook 90
PERSONAL NOTES—Midwest .. 74 East 78
South .... 78 Canada .. 83
Pac. Coast 60-74

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ABC

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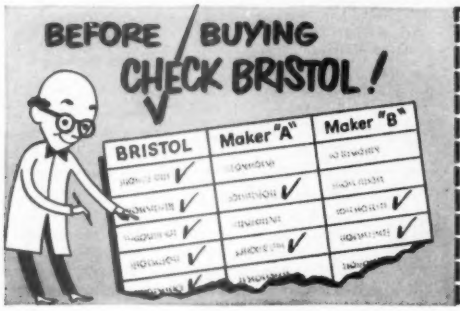
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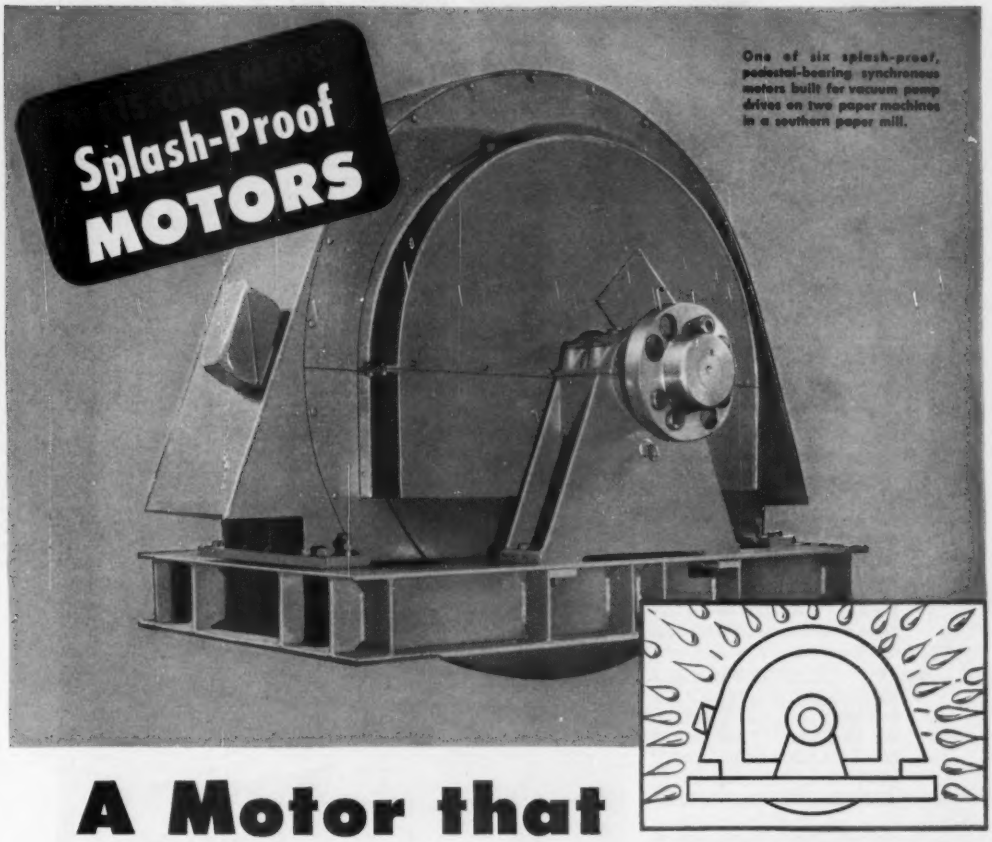


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One of six splash-proof, pedestal-bearing synchronous motors built for vacuum pump drives on two paper machines in a southern paper mill.

A Motor that NEEDS NO PAMPERING

YOU CAN put motors like this to work just about anywhere in a paper plant because their splash-proof design keeps water and other liquids out.

This design enables you to locate driven equipment for maximum installation economy and efficiency . . . without resorting to special motor housings or separate motor rooms.

Built-in protection—meeting NEMA standards for splash-proof construction—offers you a *threefold* saving in operation: (1) Maintenance costs are reduced. (2) Down time is minimized. (3) Motor life is lengthened.

By specifying Allis-Chalmers motors, you gain all these advantages *plus* sturdy fabricated-steel stator yokes . . . securely held windings processed for long insulation life . . . liberally proportioned bearings . . . and many other details that contribute to low-cost operation.

You can get these features in all ratings used in the paper industry. And you can be sure that each motor will be engineered to fit your power supply requirements and the grinder, chipper, pump, or other equipment with which it is to be used.

More information about large pedestal-bearing motors is available for ready reference in the following bulletins: 05B7648 (low speed synchronous); 05B7649 (high speed synchronous); 05B7771 (induction).

Ask your nearby A-C representative for copies of these three illustrated bulletins, or write to Allis-Chalmers, Milwaukee 1, Wisconsin. A-3586

ALLIS-CHALMERS

Bingham

PRECISION BUILT FIELD PROVEN PUMPS

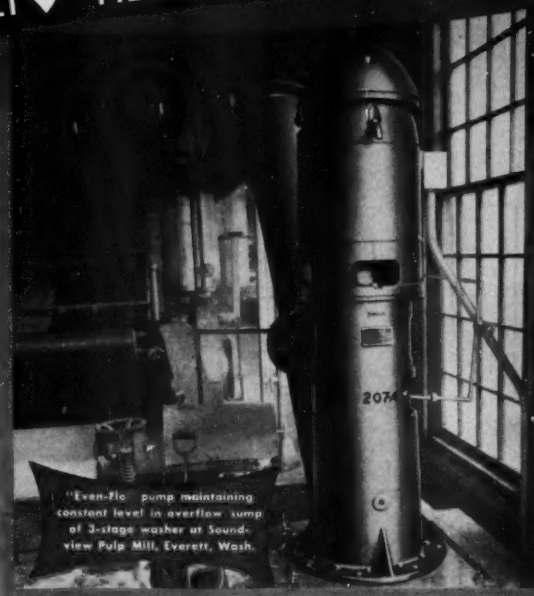
"Even-Flo" Pumps WILL NOT BECOME Airbound

Bingham "Even-Flo" Pumps discharge with an even non-pulsating flow regardless of variation in supply. An outstanding feature of the Bingham "Even-Flo" Pump is maintaining a constant liquid level at the suction no matter how varied the incoming supply may be.

Bingham "Even-Flo" Pumps are being used effectively in the Pulp and Paper industry for such services as: • *Primary and Secondary Screen Transfer* • *Seal Pits for Barometric Legs* • *White Water and Stock Chests* • *Mill Sewage and Waste Liquor Sumps* • *Sludge Collecting Chests* • *Acid Sumps* *Fan Pump* • *Washers* • *Save-Alls*

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Bingham "Even-Flo" Pumps, like all Bingham products, are precision built in our new, modern plant. All rotating parts are dynamically balanced. All parts requiring close tolerances are ground on heavy duty precision grinders. Each part is subjected to rigid inspection by craftsmen who for years have been trained to follow Bingham's high standards of manufacture.



"Even-Flo" pump maintaining constant level in overflow sump of 3-stage washer at Soundview Pulp Mill, Everett, Wash.



Section of Inspection Department in our new modern plant.

SEND NOW FOR "EVEN-FLO" FOLDER NO. 36
It gives detailed information on this remarkable pump.

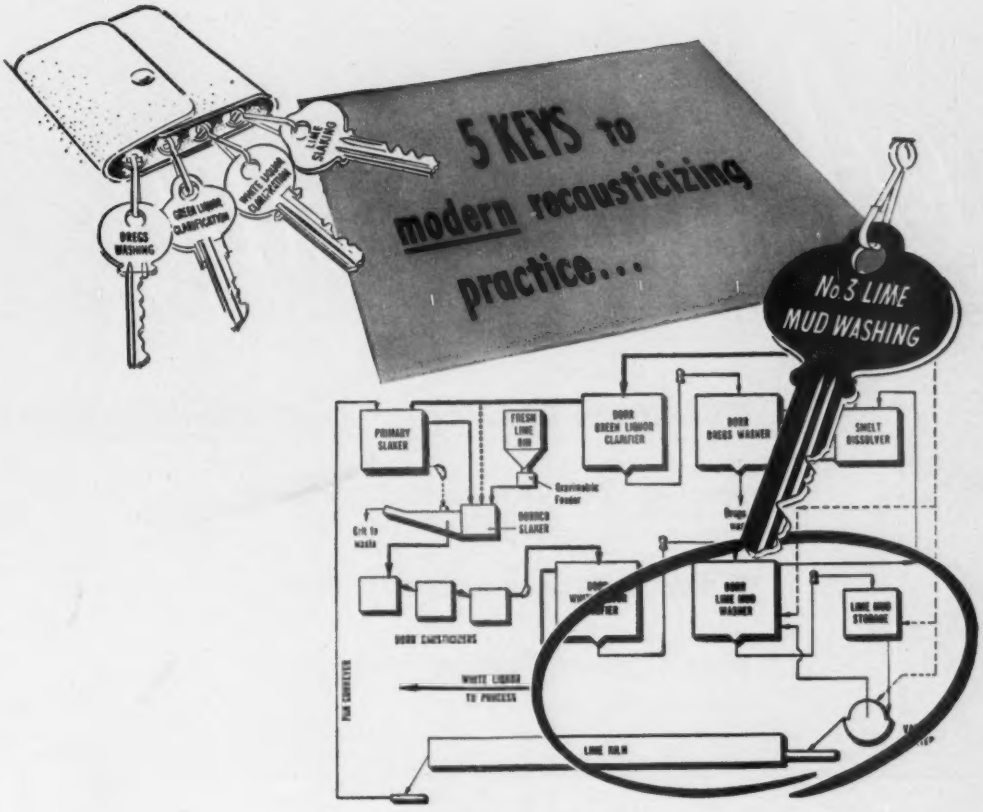


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Two stages of counter-current decantation washing of lime mud prior to filtration is now a standard design feature of the Dorr Continuous Recausticizing System. It produces a thoroughly washed lime mud which yields a filter cake feed to the kiln containing one-half of one percent soda expressed as Na_2O.

In practice this means . . .

- Increased chemical recovery.
- Improved filter and kiln operation.
- Longer life for kiln linings.

Two stage mud washing is only one of the important unit operations in The Dorr System. A new bulletin, #3301, describing the recausticizing operation in detail, will be sent on request. Address inquiries to The Dorr Company, Stamford, Conn.; or in Canada, to The Dorr Company, 80 Richmond Street West, Toronto 1.





Announcing

The New Downingtown Masson-Scott Super Cutter and Layboy Now Introduced for the American Paper Industry



View of the Super Cutter from delivery end showing layboy at the starting position.

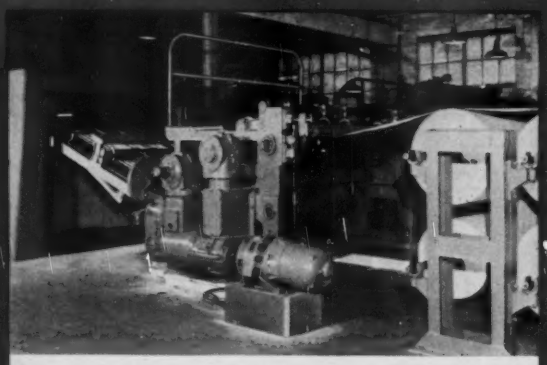
NEW ACCURACY
NEW SIMPLICITY
NEW VERSATILITY
NEW ACCESSIBILITY

at high production speeds—low maintenance cost

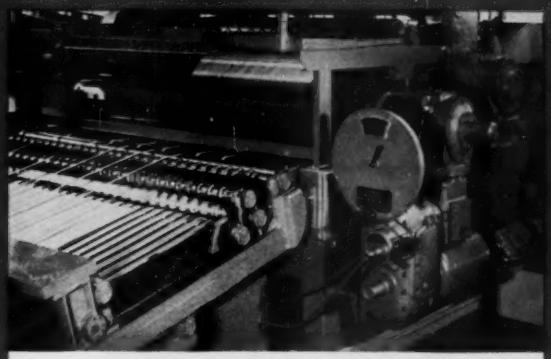
For the first time the famous Masson-Scott Super Cutter and Layboy—developed in Great Britain—is now manufactured in America.



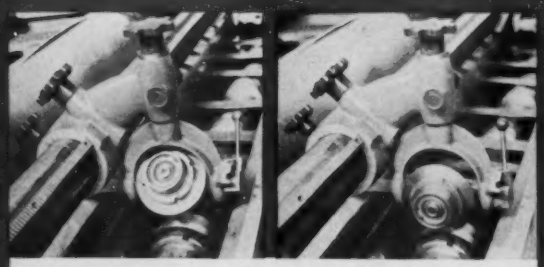
The overlapping layboy piles the sheets from the floor level upwards permitting high stacks with the cutter itself located close to the floor.



The drive, in totally enclosed oil lubricated units, is fastened directly to the cutter frame and is easily accessible.



Another view of the drive side showing adjusting mechanism.



The rack and pinion movement of the top slitter units and the hand-wheels for the depth and angle of engagement can be seen in the photographs above. (Right: engaged. Left: disengaged.)

The Downingtown Masson-Scott Super Cutter and Layboy is a high speed, precision sheet cutting machine developed by Masson-Scott in England over a period of years. It is now manufactured exclusively in this country by Downingtown. The Super Cutter and Layboy is capable of a high rate of production, yet maintains a degree of accuracy not previously associated with rotary sheeting equipment. The machine is precision engineered for sustained high operating speeds. The specially designed cross cutting knives permit an exceptionally clean cut through heavy combined substances. Write for Bulletin No. 252 which describes the Downingtown Masson-Scott Super Cutter in considerable detail.

Downingtown Manufacturing Company • Downingtown, Pa.
Pacific Coast Representative: John V. Roslund, Pacific Building, Portland 4, Oregon
Downingtown Fibrepulper Manufactured in Canada by Waterous, Ltd., Brantford, Ontario

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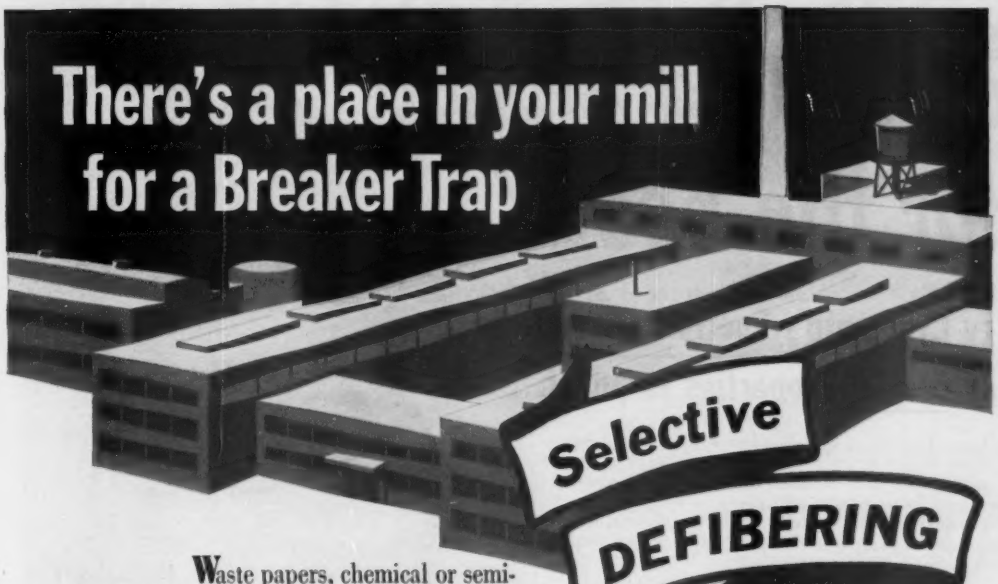
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Paul Bunyan's suspender buttons broke, exposing his new fancy shorts. Ole Oleson, the blacksmith, quickly riveted old wagon wheels on Paul's pants to save him further embarrassment!

A reproduction of this incident from the fabulous life of Paul Bunyan—the sixty-third of a series—will be sent on request. It will contain no advertising.

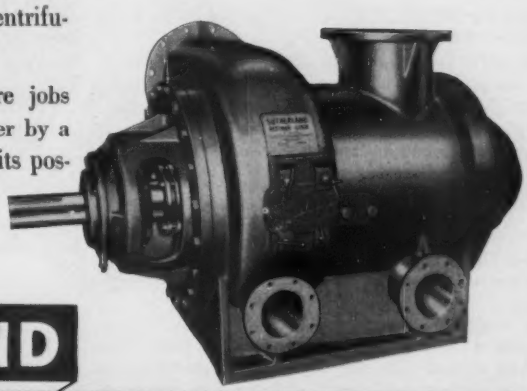
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Waste papers, chemical or semi-chemical pulps . . . all can be defibered with a minimum of power by the rugged Sutherland Breaker Trap. Its action is selective, too. Thus oversize fiber bundles are broken down, while hard lumps of dirt, rubber bands, etc., are left whole so that they can be rejected by conventional screening methods. At the same time, tramp metal is effectively removed by centrifugal action.

Your mill probably has one or more jobs that can be done better with less power by a Sutherland Breaker Trap. Investigate its possibilities today.



Write or wire for our new descriptive folder.

SUTHERLAND

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Breaker Trap

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PAPER PRODUCTS 2157-E, 2158-E soften tissue and absorbent paper. Chief advantage: they can be added directly to the beater.

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PAPER PRODUCT 2270, a specially fortified rosin size for improved sizing results.

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PITCH DISPERSANT 1677 prevents the formation of pitch agglomerates which plug the screens and stick paper to the rolls.

THE BARDAC PROCESS enables the addition of large amounts of resinous dispersions to paper and paper board products without white water losses or equipment fouling.

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RICE BARTON

DynoPulper

is comprised of a horizontal circular vat, having two DynoPellers. Stock may be charged all at one time, in bale or loose form, through the topside charging hopper.

Standard models of DynoPulper are designed for capacities of 500 to 2000 pounds. It may also be arranged for continuous discharge.



Laboratory size models are available.

● The DynoPeller

is the heart of all DynoMachines. Its concave face is lined with rough, hard carbide particles. As the DynoPeller rotates it causes a suction at its center that pulls the stock toward it. Centrifugal force then causes the stock to flow rapidly over the rough carbide particles under a gentle hydraulic pressure. This effective dynomizing action completely disintegrates the stock . . . separating each fiber from its neighbor while maintaining its original length.



RBR 3-52

RICE BARTON Research Corporation

WORCESTER 1, MASS.



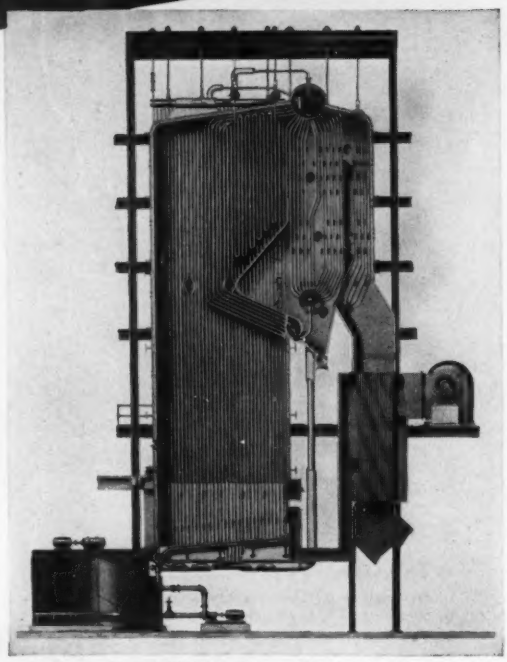


CONNOISSEUR:

one well versed in any subject; especially one who understands the details, techniques, or principles of a **fine art.**

To the fine art of handling and burning black liquor, B&W brings an aggregate of 17 years' experience. This practiced understanding of the details, techniques, and principles of black liquor recovery is evidenced by the number of Babcock & Wilcox installations placed in successful operation since 1935—totaling more than *17 thousand B&W tons of recovery capacity.*

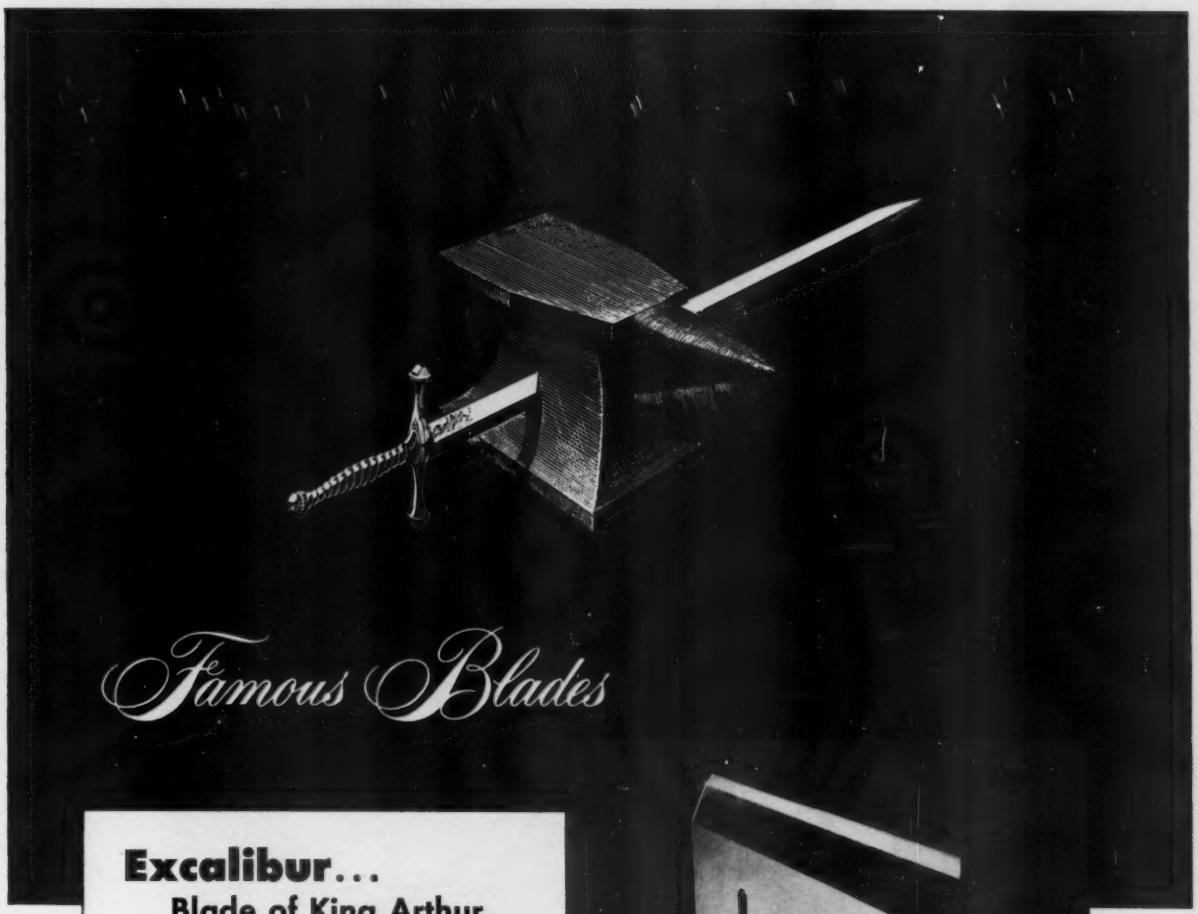
B&W technicians will be glad to discuss your problems of burning and recovery: in connection with black liquor . . . or with any of the sulphite-liquor processes. The Babcock & Wilcox Co., 85 Liberty St., New York 6, N. Y.



Typical B&W Black Liquor Recovery Unit.



P-762



Famous Blades

Excalibur...

Blade of King Arthur... symbol of leadership

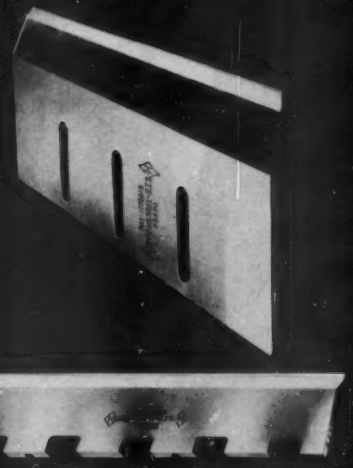
Created by the magician Merlin, Excalibur, the sword of King Arthur possessed great powers. Above all, it symbolized the authority and leadership of the King. Only Arthur, the true leader, had the power to remove Excalibur from the anvil in which it was embedded and wear it as ruler of all England.

Heppenstall CHIPPER KNIVES ... symbols of leadership in outstanding service to industry

Records of performance taken from plants where these knives are in constant use show such advantages as:

- ★ MORE HOURS BETWEEN GRINDS
- ★ LESS SAWDUST WASTE
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- ★ LOWER OVERALL BLADE COST

These famous Chipper Knives can give *you* these advantages. Make them your standard—today.



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Wherever highest accuracy and complete reliability in flow measurement and control are vital to successful processing, it is significant that Foxboro Instrumentation is preferred. Whether your problem involves gas, steam, or liquids . . . in pipes, ducts, or open channels . . . the premium quality and complete diversity of Foxboro Instruments, backed by unequaled application experience, assure you an extra measure of satisfaction.

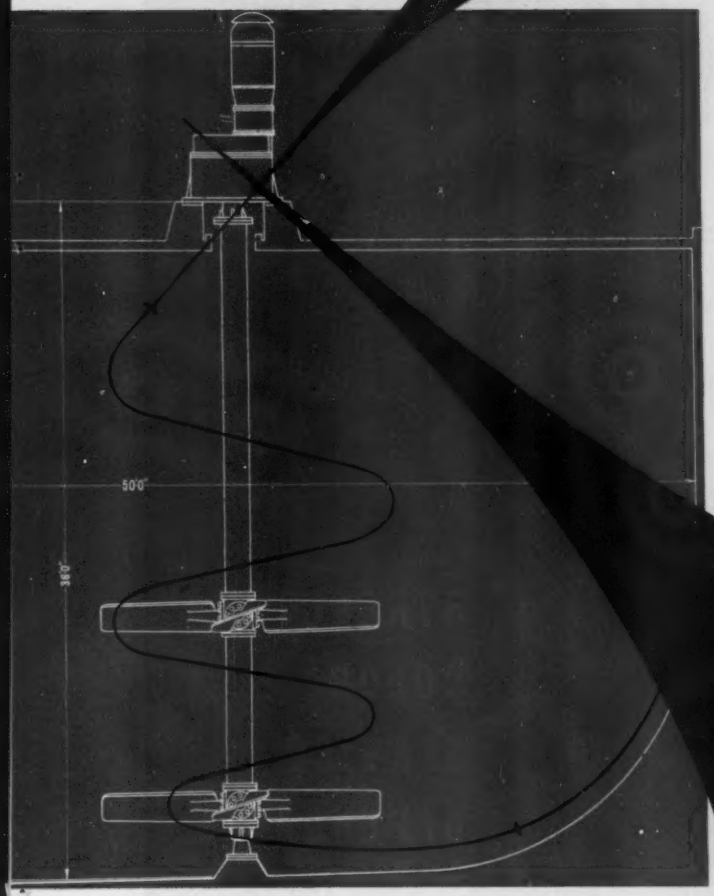
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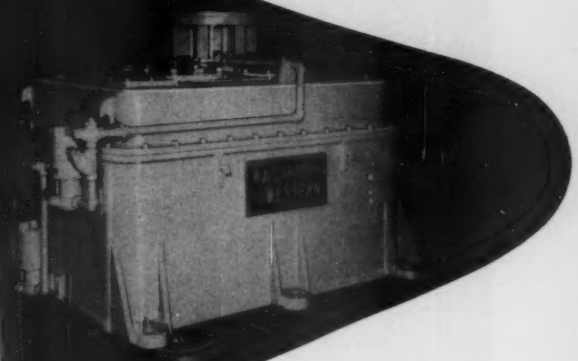
TO CUT COST of PULP STOCK AGITATION



Use Larger Tanks and Specify Pacific-Western Reducers for the Agitator Drives

By agitating more pulp stock in a larger tank many progressive pulp mills have been able to cut the cost of production of the same amount of stock in several smaller tanks with their separate driving units. Better blending and more satisfactory agitation are additional benefits obtained in large tank installation.

Pacific-Western application engineers, backed by more than fifty years of service to the paper industry, are well equipped to design and produce the more powerful driving units required for large tank agitation. A letter or call to our nearest plant or office will bring a trained specialist to study your power transmission problem on the job.



A Pacific-Western TV-64 vertical triple reduction unit was designed and manufactured for the James Brinkley Company for use by a Pacific Northwest mill as an agitator drive for unscreened pulp stock in a tank 50′ in diameter by 34′ high. Two variable pitch propellers, each 15′ in diameter, provide the stock agitation.

The Pacific-Western unit has a ratio of 90 to 1 and was designed for operation with a 200 HP motor at 1750 RPM. The reducer has an output shaft 8″ in diameter and a thrust capacity, up or down, of 45,000 pounds.

5260

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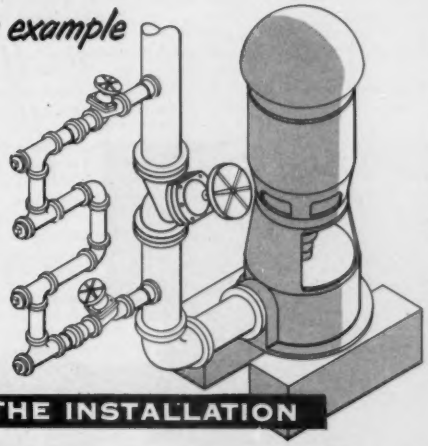


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How's This For Solving a Valve Problem ...on Corrosive Well Water, for example



THE INSTALLATION

On outlet of well water pump supplying plant of Barr Rubber Products Co., Sandusky, Ohio. Sulphur content of water extremely high.

VALVE SERVICE RATINGS

SUITABILITY:	Just what was needed
MAINTENANCE COST:	None to date
CORROSION-RESISTANCE:	No evidence of corrosion
SERVICE LIFE:	Outlasted any 2 other valves so far
OPERATING RESULTS:	Pump shutdowns for valve repairs stopped
PRICE:	Much less than alloy valves
AVAILABILITY:	Stock item in Crane line

THE HISTORY

Valves formerly used here lasted no more than 6 months. Under constant exposure to severe erosive and corrosive effects, they failed to provide the easy operation and positive seating needed in this service. They required excessively frequent re-packing and seating maintenance.

Problem solved by replacing with Crane Packless Iron Body Diaphragm valves in main line and by-pass. Installed more than a year, they show no corrosion, no effects of service. Operate smoothly, seat tightly, with no maintenance needed to date.

THE VALVE

Crane No. 1611 Iron Body Packless Diaphragm Valves featuring separate disc and diaphragm. No packing to maintain; no stem leaks. Neoprene diaphragm used to seal bonnet only. Independent disc with neoprene insert insures positive seating even should diaphragm fail. Also fully neoprene lined valves. Many common and corrosive services. See your Crane Catalog or Crane Representative.



The Complete Crane Line Meets All Valve Needs. That's Why,
More Crane Valves Are Used Than Any Other Make!

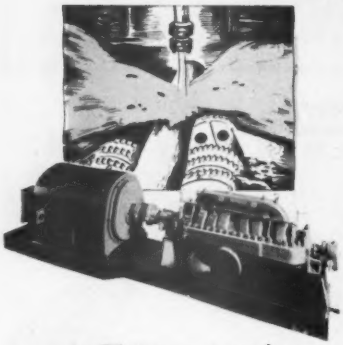
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An Elliott motor teamed up with a Bingham pump for hydraulic barking.

SAVE THE COST OF HOUSING for motor-driven pump units, by using motors that supply their own housing, proof against wind-driven rain, mist, fog, snow, sleet and temperature. Motors you can set up outdoors, wherever is most convenient for the work they have to do.

Elliott "Fabri-Steel" construction permits of motor design ideally suited to the need, providing the rigidity, crack-proof strength, and rugged endurance which combine with other Elliott refinements to produce a motor outstandingly dependable, whether on a hydraulic barking pump drive, a chipper drive, a boiler feed pump drive or any other motor application.

Sizes from 50 hp up, all enclosures, all types. Write for bulletin on the motor you need.

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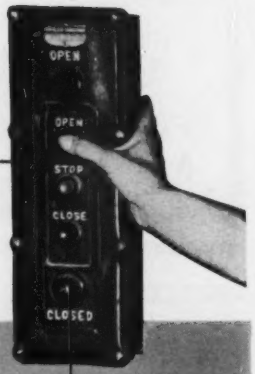
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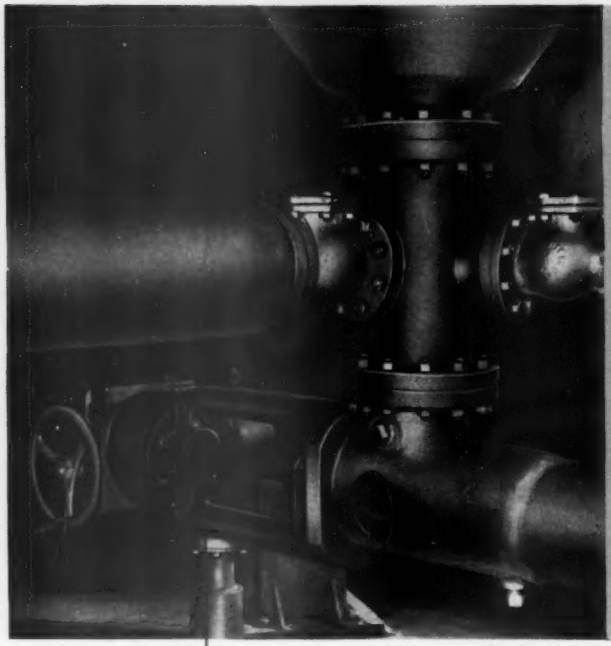
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easy way to blow down pulp digesters





Press a button. ***That's all there is to it.***

You don't even have to go down to the discharge floor; the button can be conveniently located right on the operating level.

That's one of several reasons why Yarway Remote-Controlled, Motor-Operated, Digester Blow Valves have become standard equipment on pulp digesters in many leading plants—*names on request.*

One of eight Yarway Digester Blow Valves installed at a Canadian paper mill.

OTHER REASONS:

1. The famous Yarway non-clog *seatless* operating principle that assures tightness and effectively seals off the digester, preventing loss of black liquor and increasing the number of cooks per day.

2. Yarway's rugged construction withstands severe shock.

3. Yarway's modern metallurgy withstands severe chemical action.

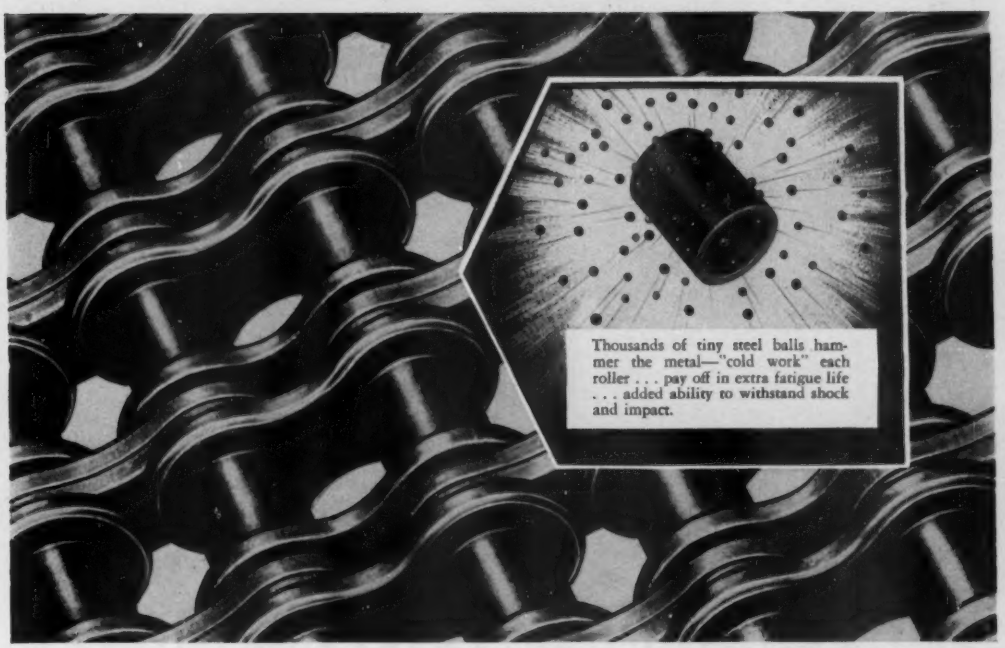
4. Fast operation results from motor control and self-cleaning free discharge.

If you are interested in increased production, low maintenance, savings in labor—then you're interested in Yarway Digester Blow Valves. Write for full description and specifications in Yarway Bulletin B-440.

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Get the roller chain that gives you SHOT-PEENED rollers...



look for the darkened rollers!

THERE are sound reasons for the universal acceptance of Link-Belt Precision Steel Roller Chain. Two of them—shot-peened rollers and Lock-type Bushings—are shown here.

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Whether it's for drive or conveyor service, you can get the best in roller chain from the complete Link-Belt line—single and multiple widths, in ⅜" through 3", and double pitch, 1" through 3". Next time you need roller chain, call the Link-Belt office near you.

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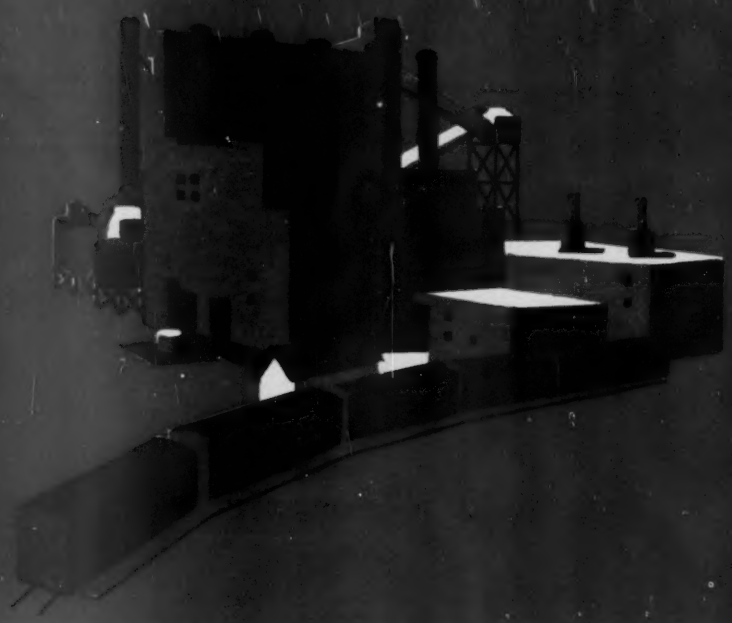
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LINK-BELT COMPANY: Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Springs (South Africa). Offices, Factory Branch Stores and Distributors in Principal Cities. 72.807



Lock-type Bushings increase ability to withstand shock loads

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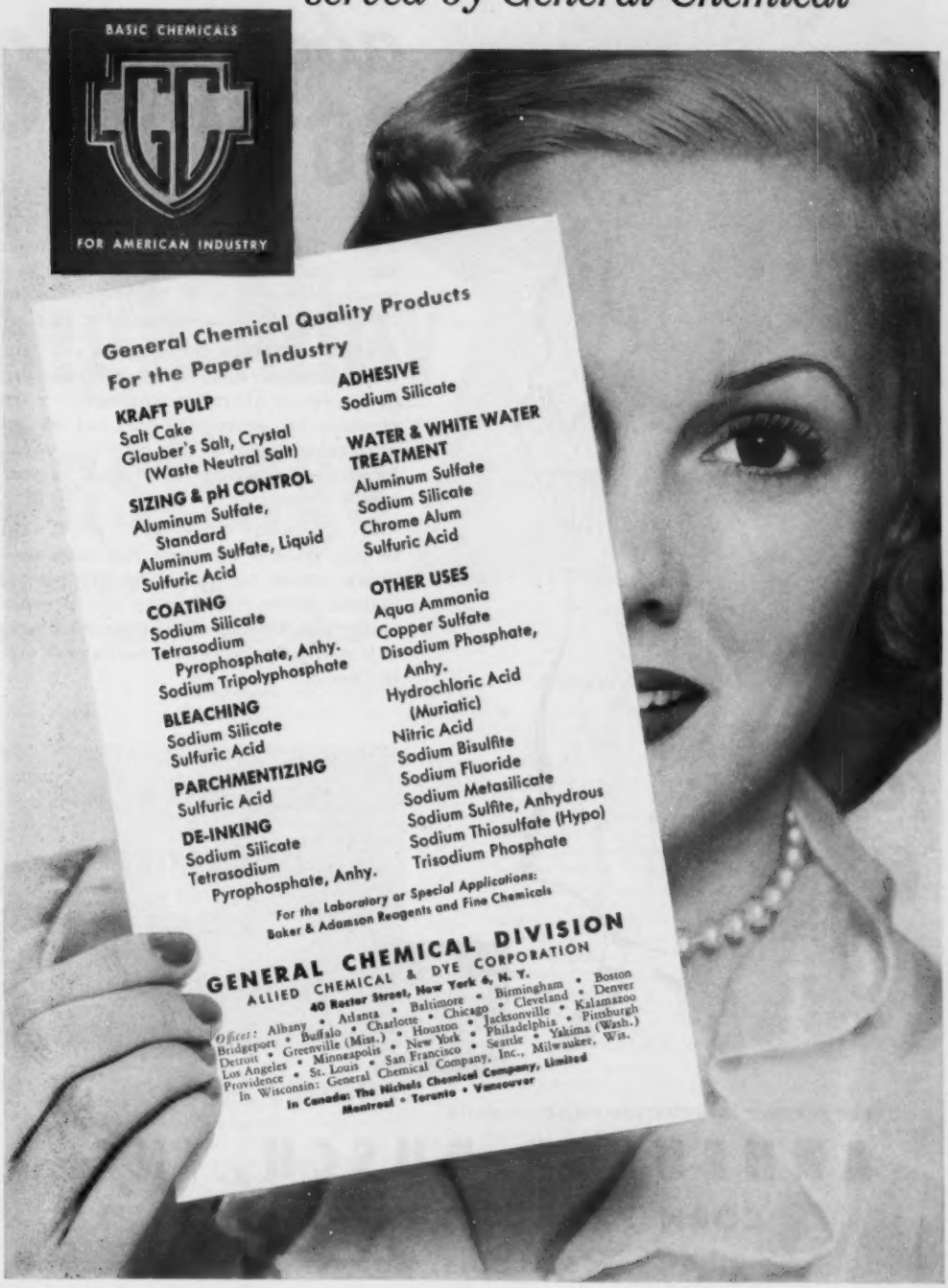
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What's PERFECT *about a* 36?

A dress that fits a "perfect 36" figure looks like a tent on the average size gal. As a matter of fact . . . to fit *perfectly* . . . some clothes have to be tailor-made.

It's that way with the supplies you buy, too. For instance, we have a complete line of standard starches and other corn products for paper mill use; but we are *also* set up to provide you with any *special* formula or product, *tailor-made* to your specifications.

And . . . standard or special . . . you'll want to buy from a company like Anheuser-Busch, whose reputation for products of highest quality, uniformity and dependability is as dominant in the paper industry as it is with retailers and consumers all over the world.

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Special Stainless Valve Stand Casting

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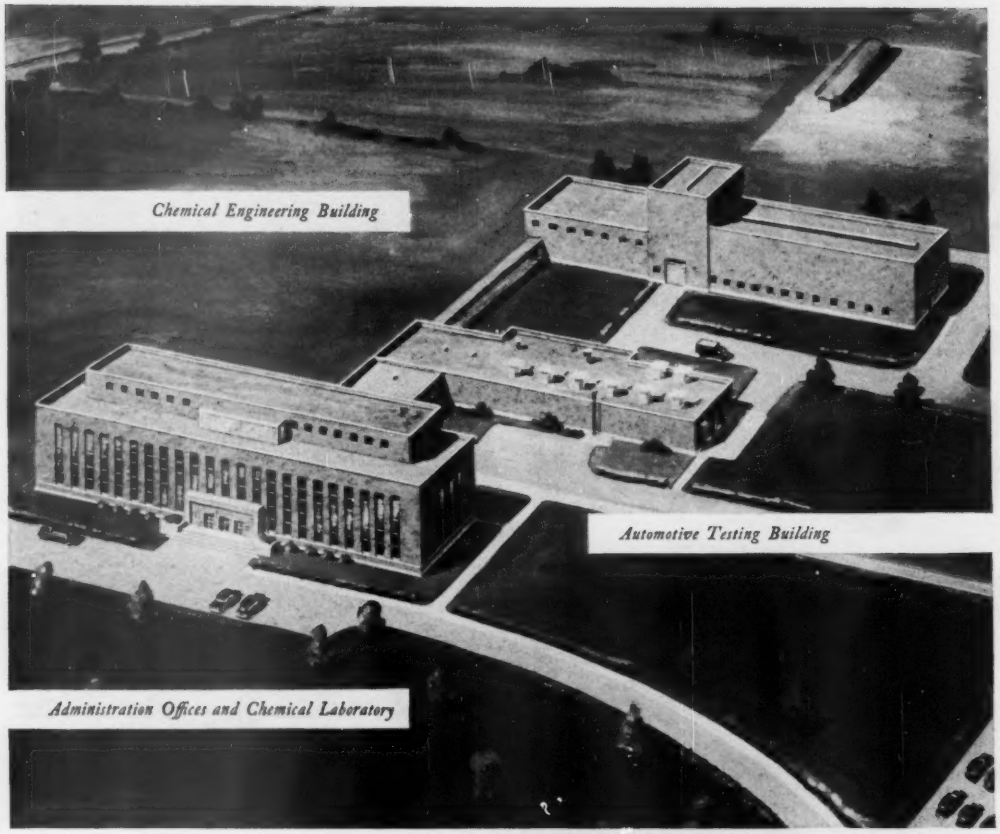
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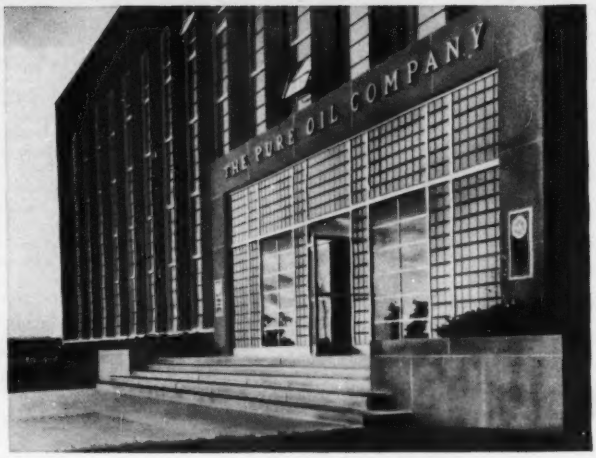
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Crystal Lake
LABORATORY

When Pure Oil Company considered building a Research and Development Laboratory at Crystal Lake, Illinois, Stone & Webster Engineering Corporation was engaged to make preliminary studies and estimates. It later designed and furnished engineering supervision during the construction of the project.



STONE & WEBSTER ENGINEERING CORPORATION

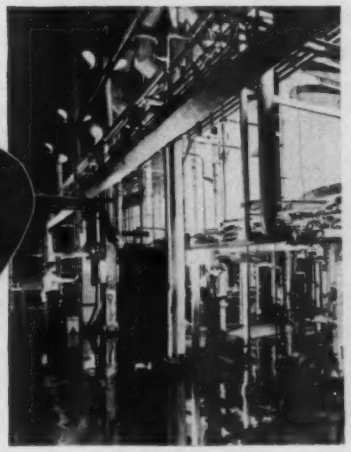
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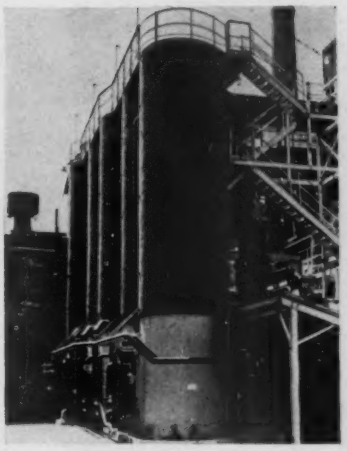
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CREATIVE EVAPORATOR ENGINEERING

Indoors or outdoors —Use High Efficiency Conkey Integral* Evaporators

*Patented

Designed to do your job best!





With minor design changes the Conkey Integral Evaporator is adaptable to any plant location requirement without sacrifice of its improved design and operational features. The Conkey may be set outdoors and provided with skirts making it completely self supporting. It may also be set indoors with the skirts omitted and structural steel supports added, which are provided either by the building framing or independent columns.

These advantages are found in all Conkey Integral Evaporators regardless of final job details: (1) Easier to erect. (2) Needs less space. (3) Lower overall pressure drops. (4) Larger, more efficient entrainment separators. (5) Fewer mechanical joints to guard against air leakage.

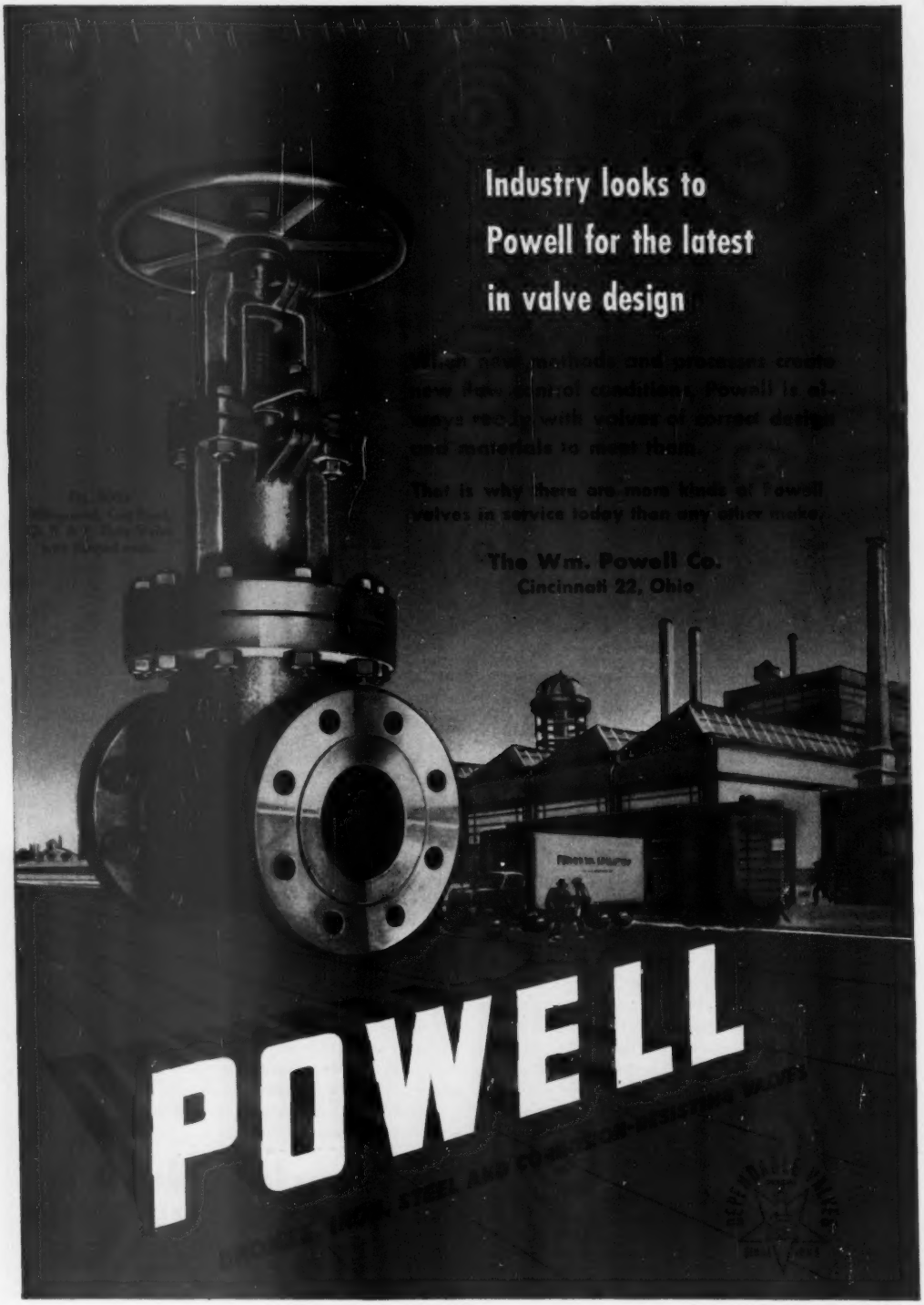
Because its design reduces pressure drop losses between effects, the Conkey Integral Evaporator provides an increased working temperature drop across the heating element surface. Result: a net positive gain in evaporation—extra evaporating capacity. For complete technical information, write for Evaporator Bulletin.

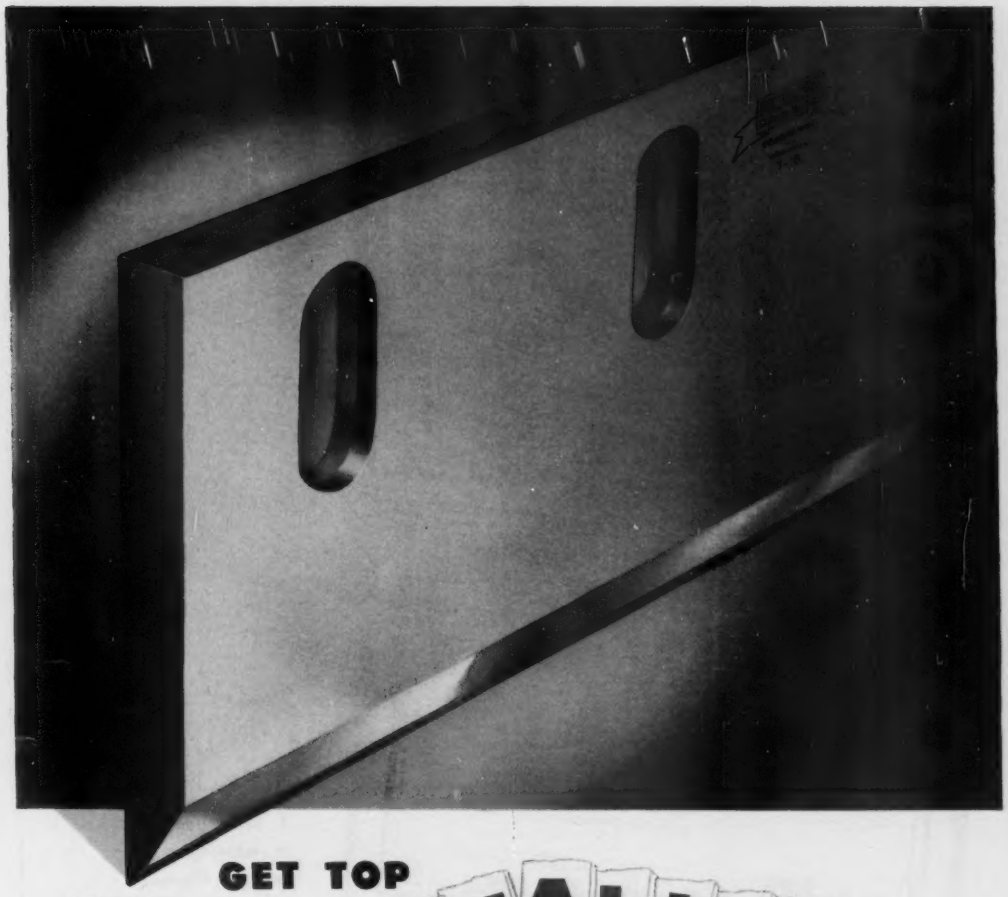
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Your percentage of uniform chips that get through screening and into the cooker . . . that's what determines profit or loss in your wood room. And with wood such a big factor in paper-making costs today . . . it doesn't pay to get less than the best in chipper knives.

That's why you find Simonds T-18 Chipper Knives in modern, cost-conscious pulp mills all over the country. For these extra-tough knives hold their cutting edges far longer . . . and consistently turn out *clean-cut chips.* Slivers, sawdust and bruised chips are reduced to a minimum. Made of special Simonds T-18 Steel that's known for its ability to take the high speed, brutal beating of chipper operation, *Simonds Chipper Knives give you one of the most effective cost-control systems you can install in your mill.* See your dealer today.

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In recognition thereof, these lands are hereby designated a WEST COAST TREE FARM *by the Joint Committee on Forest Conservation*

Chairman, Joint Committee on Forest Conservation

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3. **South Olympic** (cooperative ownership)
4. **Schafer Bros.** (cooperative ownership)
5. **Clemons**
6. **Willapa**
7. **McDonald**
8. **Vail**
9. **Mt. St. Helens**
10. **Calapooya**
11. **Millicoma**
12. **Klamath Falls**
13. **Skykomish**
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To qualify as a "Certified Tree Farm", forest land must be operated according to certain rules that apply all over America. Weyerhaeuser instituted the first Tree Farm in 1941, and by March 1, 1951, there were 2,980 Tree Farms operating 23,086,100 acres in 31 states!

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The Weyerhaeuser Timber Company policy of carefully harvesting trees, utilizing them to the fullest, and growing more trees for many tomorrows, guarantees the Pulp Division's customers an assured supply of woodpulp.

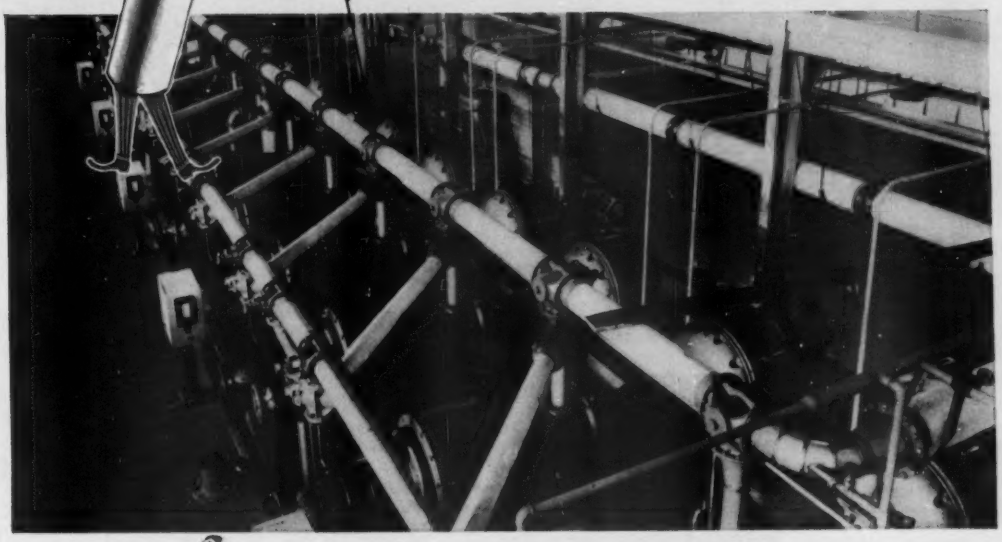
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...use Transite Pipe"

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Like many leading paper mill operators, you'll probably find that Transite Pipe is money-saving insurance against these production problems—and for three good reasons:

It resists corrosion—Made of asbestos and cement by a special Johns-Manville process, Transite is a dense, non-metallic pipe that combats corrosion. It has exceptional resistance to such chemical agents as mild alkalis and acids that often cause deterioration in other pipe materials. Moreover, because Transite cannot rust, it protects paper stock from discoloration.

It reduces sliming—Service records in leading paper mills show that Transite Pipe stays cleaner longer. Its unusual ability to resist sliming reduces shutdowns for cleaning—means a minimum of pipe line maintenance.

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Complete Transite Pipe systems, including couplings and Streed Transite Lined Fittings, are available for stock, washed pulp, white water, and other process and water lines. For further information, write Johns-Manville, Box 290, New York 16, N. Y.

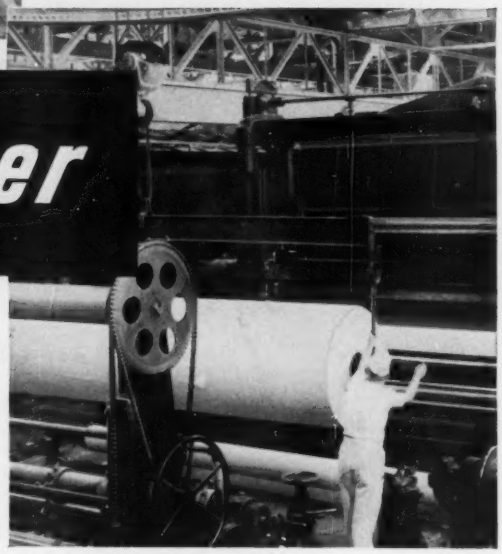
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from pulp logs



to paper

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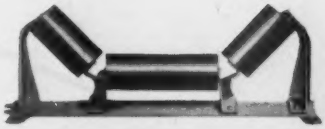
The illustrations on these pages give you some idea of the wide variety of choice that Chain Belt offers you. Your Rex Field Sales Engineer is specially trained to help you in your selection. Call him today, or for complete information write for Bulletin 52-51. Chain Belt Company, 4691 W. Greenfield Ave., Milwaukee 1, Wis.

REX

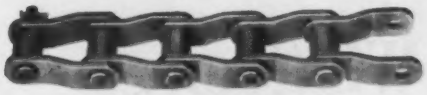
BALDWIN-REX®



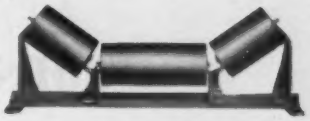
REX® COMBINATION DUROBAR® CHAIN has inside block links of malleable iron or Rex Z-Metal, and side bars of high carbon steel. These husky chains are great favorites for all types of conveyor service in pulp and paper mills. Eccentric barrel construction makes for better sprocket action and greatly reduces chain wear.



REX WOOD CHIP IDLERS are sloped to a steep 45° angle to greatly increase belt capacity. Chips can be piled higher and loaded closer to the belt edge without fear of spillage. Have same long-life design features as Rex standard idlers.



REX CHABELCO® STEEL CHAIN combines relatively light weight with high strength. It is used in both drive and conveyor service . . . can handle heavy loads and withstand severe shock and vibration. For those really tough jobs, you can't beat Rex Chabelco.

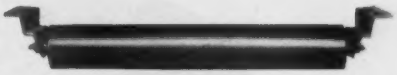


REX STANDARD TROUGHING IDLERS are used for wood chip, bark and pulp handling. Roller or ball bearing equipped interchangeable rolls are supported in brackets of unbreakable malleable iron. Triple labyrinth grease seal keeps grease in . . . dirt out.





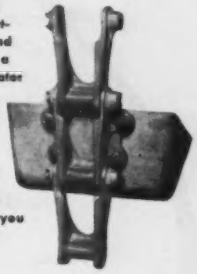
BALDWIN-REX® ROLLER CHAIN is a high strength precision steel chain suitable for high speed drive service. It is available in single, double, triple and quadruple strand in a complete range of sizes and strengths to suit every driving requirement. Pitch range is from ¼" to 2½".



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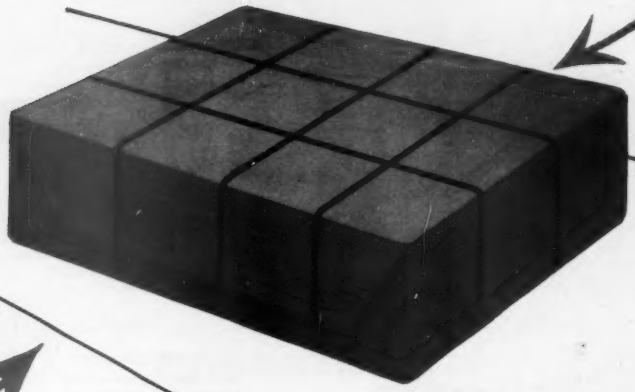
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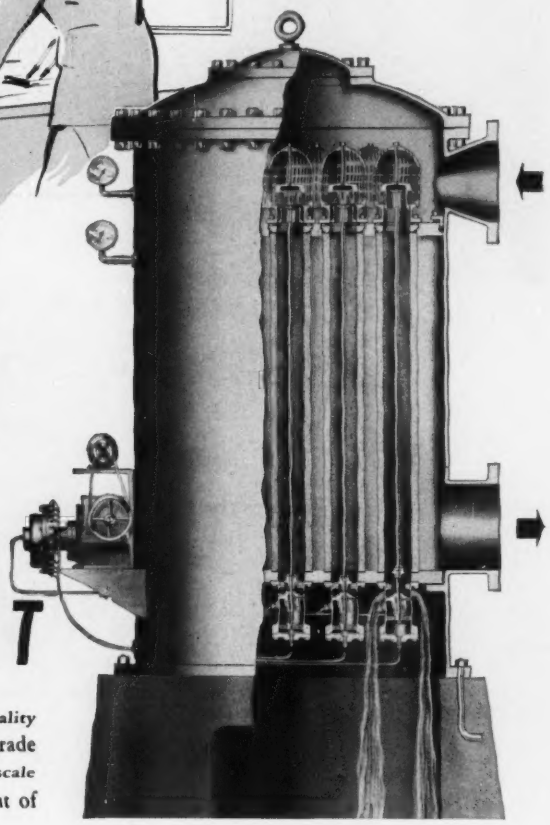
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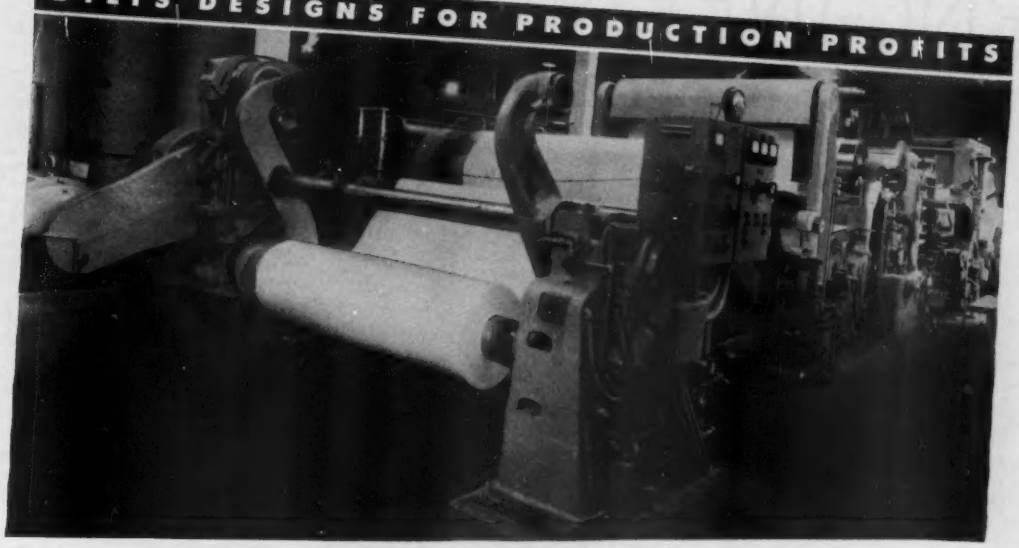
Remember—in its early stages your product is about 98% water, and most water-borne impurities stay with the stock.

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ENGINEERING AT U. B.

HOW IT IS ORGANIZED, CARRIED OUT

How is engineering planned, organized and carried out for a major pulp and paper improvement and expansion program?

Take Union Bag & Paper Corp. for example. And it should be a good example. For development engineering seems a never-ending series of problems and projects on the banks of the Savannah, particularly since World War II. It has built up crescendo-like to its current Programs "A" and "B" (outlined in PULP & PAPER, December 1951 issue, p. 36) which eventually will make this a 2,000 daily tons world record size mill with perhaps the largest self-generated power concentration for any private industry. Two big new post-war machines, a new high pressure boiler and two turbines, a doubling of the digester line-up to 34 in a row—those are just some prominent features of the post-war activity, mostly still being carried out.

Some things U. B. is doing in engineering organization are not unusual—other mills organize and operate in some of the same ways. But it may be interesting to review the entire procedure at Savannah, as a case history. Phases of it, here and there, may be of value to other companies. This is the picture, as it was unfolded to PULP & PAPER on a recent visit to the Savannah industry:

Union Bag presently has about 60 engineers and draftsmen in its Construction Engineering Department. They are all salaried men. The lowest number since the war for this department was about 15. When No. 5 machine went in, it had climbed to 35. It will be around 60, however, for at least two years.

In addition, Union Bag has about 20 engineers and draftsmen on mill maintenance. Besides maintaining equipment and buildings in the Pulp and Paper Division, they do minor construction work, largely of alteration nature. Construction Engineering may do a job as small as $10; Maintenance may have a $100,000 project. There is no dollar sign to differentiate between the types of project that may go to one department or the other.

For new construction, U. B. also has the services of a general contracting firm, working on fee plus cost basis. The Morton C. Tuttle Co., of Boston, is general contractor. But all sub-contracts are approved by U. B., through its chief engineer; thereafter, the sub-contractors report to the general contractor.

How Engineering Is Initiated

Any new idea for expansion or improvement is first discussed by Manufacturing Vice President Gunnar Nicholson with sales executives and with T. T. Dunn, resident manager at Savannah. On major overall projects, President Alexander Calder and other top executives, also participate at the beginning; or later, after studies are made.

Preliminary estimates by Construction Engineering may take a few weeks or a month. The project might then be immediately approved and pushed forward, or it may be tabled for years. Then firm estimates are made, and appropriations approved.

A significant characteristic of planning and engineering at Savannah is the close cooperation between engineers and operators, according to Robert T. Inman, who is chief engineer.

"In engineering, we never make any decisions of importance without consulting with the superintendents and key men in operations," said Mr. Inman. "They are in the Construction Engineering Department every day. They feel the job that affects their operation is their own 'baby'."

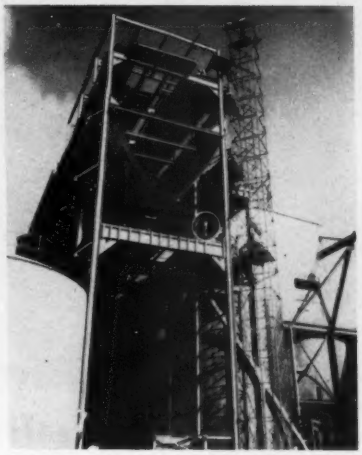
Many changes may be made before a job is completed as a result of these consultations, but rarely are they necessary afterward.

In a company as big as Union Bag, it is regarded as essential that its engineers and other key men travel and observe in other mills the new improvements which they might some day effect at Savannah, or further improve upon. Their engineers have probably seen everything of importance that is new in U.S. and Canada, and, in some cases, as far as Sweden and other countries.

Engineering Organization

Here is the way engineering is organized at Union Bag:

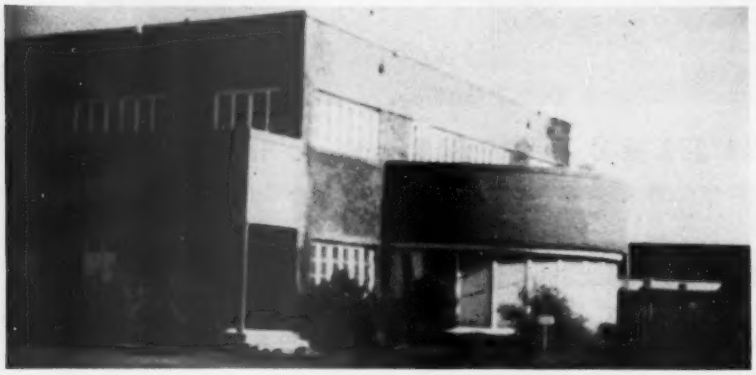
The Construction Engineering Department, headed by the chief engineer, is set off as a separate body and reports directly to the resident manager. Bullard Harris heads up Maintenance Engineering and reports to the general superintendent, James Lientz, who reports to the manager of the Pulp & Paper Division, Dr. C. E. Hartford, who in turn reports



OUR COVER PICTURE

Here is a replica of our unusual cover picture of this month, which shows how Union Bag's Construction Engineering Dept. is keeping up with the Savannah Mill's rapid expansion. This picture shows steel going up for increased digester capacity and overhead chip bin. Note the steelworker in center of picture being lowered to part of the framework. Eventually there will be 34 digesters at the Savannah mill—and there will be an actual plant-size experiment carried out to help solve what is perhaps the No. 1 "headache" of the kraft pulp industry today—the corrosion bugaboo. Union Bag will do this by testing different linings—Inconel, stainless steel clad, carbon brick, and perhaps variations of these—as well as plain steel.

BEST NEWS OF ALL for Union Bag's 60-man Construction Engineering Department is that it was to soon move into this modern brick structure at Savannah, giving up without noticeable pangs the temporary wooden housing it has occupied. This has been the mill's Administration Building—administrators will have a new one.





ROBERT T. INMAN (left), Chief Engineer, and JOSHUA J. WARD (right), Construction Engineer, are No. 1 and No. 2 men in Construction Engineering Department of Union Bag & Paper Corp. Mr. Inman is a University of Wisconsin graduate, 1925, with long experience in the industry. "Josh" Ward was U.B.'s Chief Mechanical Maintenance Engineer before going into Construction.

to the resident manager.

We are not primarily concerned in this article with the operative and maintenance engineering activities, but to indicate its scope and relationship, it may be explained that on this side of the picture besides the score or so of engineers in mechanical maintenance under Bullard Harris there is also a staff of power and electrical engineers under Charles Bush, power superintendent, and Gene Overby, chief electrician. These departments and fire, buildings, insurance, and other special departments all report to the general superintendent and these activities are coordinated and supervised through conferences held by the division manager, general superintendent.

Returning to the Construction Engineering Department, the principal assistant to Mr. Inman is the construction engineer, J. J. (Josh) Ward, Jr. Mr. Ward has been with Union Bag since prior to World War II; was chief mechanical maintenance engineer on the regular engineering staff before recently moving over to construction. When construction ends, it is contemplated he would go back to his former post.

The general contracting firm reports directly to Mr. Inman and/or Mr. Ward.

Two Levels of Responsibility

In the next rank of responsibility under Mr. Inman and Mr. Ward are these four equally ranked executives:

1. Department head for Structural Design and Layout Section.
2. Department head for Piping and Instrumentation Section.
3. Department head for Electrical Section.
4. Head project engineer.

These four comprise a nucleus in direct charge of all engineers and draftsmen in construction work. The responsibility of the department heads is primarily to get out drawings.

On the next level in organization are a group of six. Each of these reports to the head project engineer. The latter is John R. Fielding, formerly in charge of pulp and paper mill work for the H. K. Ferguson Co. Reporting to him are:

1. Power project engineer.
2. Woodyard and woodroom project engineer.
3. Paper mill project engineer.
4. Pulp mill project engineer.
5. Expeditor.
6. Estimator.

Under the pulp mill project engineer are two assistant pulp mill project engineers—one for kraft pulp; the other for the semi-chemical pulp project.

Project engineers are responsible for contacts with equipment, materials and supply salesmen and service men. They are responsible for general layouts and arrangements of their projects. They must see that engineering design on their projects is scheduled and expedited through the drafting rooms of either of the three sections listed previously—Structural Design and Layout; Piping and Instrumentation and Electrical.

They must see that materials and equipment are available at the proper time, as needed. They make inspections of work in the field. They are always in close contact with their jobs from start to finish, and they might be called assistant construction engineers. Their daily conferences with Mr. Fielding are usually attended by Mr. Inman and Mr. Ward.

No. 6 key man above—the estimator—is responsible for original estimates on costs and also maintains the "running" estimate of the projects as work progresses and the scheduling.

The No. 5 man—the expeditor—travels most of the time around the country, checking on the work of the various equipment suppliers.

At Savannah, in the Comptroller's Department of the plant, two young men who have had Washington experience, are assigned to keeping track of developments in respect to government controls and allocations. Their job is to interpret the changes in government regulations to the engineers. They cooperate closely with the No. 6 man above—the expeditor.

How Positions Are Filled

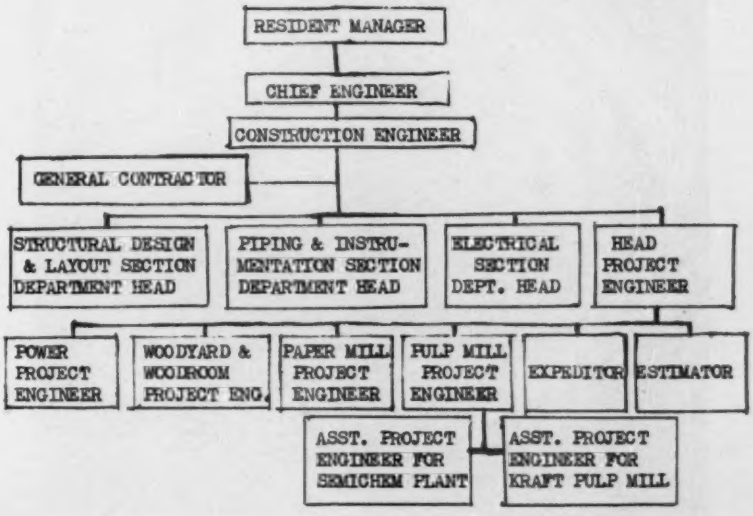
One of Union Bag's policies is to always endeavor to fill important new jobs from the mill's own permanent organization—and not from outside the company. In this manner, most of the key jobs in the Construction Engineering Department have been filled.

For instance, the pulp project engineer was assistant pulp mill superintendent. The assistant project engineer for the semi-chemical plant, a chemical engineer graduate with a doctors degree, is from the Technical Department. The wood yard-woodroom project engineer was formerly senior design engineer for the Pulp and Paper Division. The top instrumentation-man for new construction was an engineer in the instrument department. We have mentioned that Mr. Ward was mechanical maintenance engineer. In most cases, these men eventually are expected to go back to their old jobs, where assistants have moved up to take charge temporarily, or to new assignments in the operating departments.

There is, of course, a close liaison between purchasing and the Construction Engineering Department. Under the purchasing agent at Savannah, Charles O'Brien, is a special construction purchasing agent. He is Brooks Harrell, moved into that spot from head storekeeper of the mill. Purchasing activities are under the assistant comptroller for the company, Lawson Sopp, who is stationed in Savannah. While the project engineers make the contacts with salesmen, the actual purchasing is done through the purchasing agent who gives the order

ORGANIZATION CHART — CONSTRUCTION ENGINEERING DEPARTMENT

UNION BAG & PAPER CORP.



numbers and send through the formal papers.

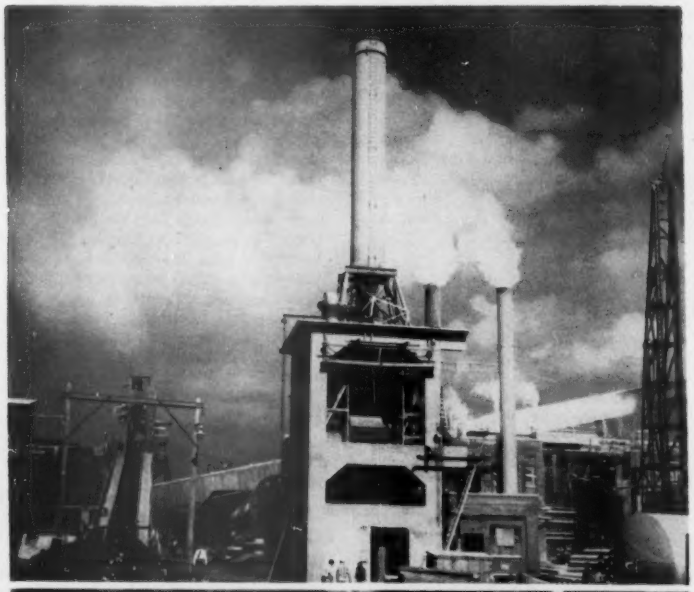
The chief engineer, the construction engineer, and the first rank of department executives under them—the three department heads and the head project engineer previously listed each have their own secretaries. The various other project engineers, expeditor, and estimator may employ these same secretaries, but they have none of their own. There also are blue print boys and errand boys on the staff.

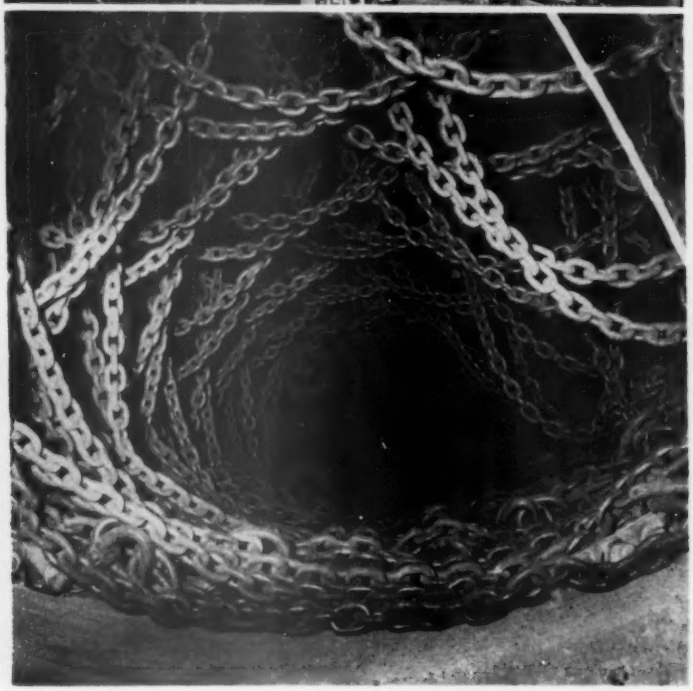
Engineering Equipment

The engineering staff has excellent equipment. Each engineer has a drafting machine, which is a semi-automatic drafting aid. The machines are calculated to increase work output by at least 10% Each engineer has a drafting table, also a reference table for the drawings being used. An individual fluorescent light serves each drafting table. All offices are air-conditioned.

A conference room is used for Construction Engineering meetings, which are not regularly scheduled but are held often, in order to prepare for shutdown work.

An excellent filing and indexing system serves the construction engineers. Drawings and records go back for 15 years and are being used almost constantly. These are in a central, handy location and includes a complete microfilm file of all tracings, contracts and vendors' drawings. There is a master file for all jobs, and all the correspondence on any project goes into the master file when the job is completed. It is indexed alphabetically and numbered from no. 1 to 1,000. Starting from 1, etc. are the jobs identified by names, as "1-apron", etc. Remington Rand specialists set up the filing system about four years ago. All tracings and files are kept in fireproof vaults.





LIME KILN AT UNION BAG

At Union Bag & Paper Corp., Savannah, Ga., where bigness is almost commonplace in any part of its operations, a lime kiln, more than twice the size of any previously installed there, has begun operation successfully and efficiently.

This 265-ft. long Allis-Chalmers lime kiln is an important step in the expansion program at U B, as outlined by Gunnar Nicholson, manufacturing v. p., and published in the Dec. 1951 PULP & PAPER (p. 36). He outlined an "A" program to bring from 1250 tons a day in 1951 to 1,750 tons by Aug. 1953, and beyond this, a "B" program pushing it up to a probable world record production for any one mill of 2,000 per day.

Accompanying photograph here shows the Allis-Chalmers system of using chains inside the kiln for more efficient contact of gases with sludge, and reduction of heat losses and excessive caking on the kiln's inner sides.

This new kiln replaces one of four smaller ones. It produces 175 tons of burned lime in 24 hours. It has a 10 ft. diameter metal tube, slanted so mud moves through, rotated by an electric motor. At one end is the new filter room, which breaks up large lumps and removes part of water in two centrifugal screens. From this "cold" end the sludge moves to hot end where oil under pressure burns at 2400 degrees. Sludge is dried and calcined and emerges as white hot lime and moved on drag conveyor to storage for kraft cook liquor-making use.

The chains, a new feature not found in old type kilns, extend the first 55 ft. through the brick-lined kiln.

EXTERIOR AND INTERIOR VIEWS of the new ALLIS-CHALMERS LIME KILN installation at Union Bag & Paper Corp., Savannah, Ga. Top view shows Filter Room for the kiln. Below, shows the massive chains used in Allis-Chalmers installations as means of retarding flow of mud, preventing caking of kiln's sides and reducing heat loss. These chains extend through first 55 ft. of 265 ft. long kiln.

EXCLUSIVE – A PAPER WEEK PROBLEM

As this issue was rolling on the presses, the annual Mecca of paper and pulp men from near and far—New York's PAPER WEEK—was in full flower again.

One of the most critical and timely problems to come before management of this industry at the Waldorf-Astoria was the subject of *COMPANY COMMUNICATIONS.* It is a new term used to define the exchange of views and information from business to public, from employer to employee, from public back up to business management.

In our next issue of PULP & PAPER, we will bring to our readers an exclusive article which tells how one important segment of this industry in the Middle West has been attacking this problem—what they are now doing and what they plan to do in order to disseminate information about their mills and companies to promote a better understanding in their communities—how they are helping each other to carry out this program.

This example in the Middle West—they called them "COMMUNICATIONS WORKSHOPS" where management men "let their hair down"—was presented as a model for the industry at New York.

Our next issue also will carry other exclusive reports on doings during *PAPER WEEK.*

WITH OUR SOUTHERN EDITOR AND HIS CAMERA:



Touring Southern Mills for PULP & PAPER, our editor snapped these personalities (l to r): MRS. FRANK MIZERAK, Pulpwood Dealer at Perry, Florida, working with her husband, driving right to operations, keeping trucks and wood moving to mills. They moved to Perry from Macon, Ga., used to operate at Beaumont, Tex.

A "GOULD" GUY in the South—J. W. SPEARS, Jr., Sales Engineer out of Atlanta office of Goulds Pumps, Inc.

FRED C. JONES, Sales Engineer for The Black-Clawson Co., out of its office at 937 Coventry Road, Decatur (Atlanta) Ga.

E. R. ZUEHLKE, Hydraulic Engineer, Shartle Bros. Machine Co., on Southern mill calls.

HENRY M. FAULKNER, recently appointed Southwest Industrial Territory Mgr. for Allis-Chalmers Mfg. Co. His h'qtrs will be in Milwaukee, however. He joined Allis-Chalmers in Atlanta and after serving in Pacific War, was Dist. Mgr. in East and in Richmond, Va.



V. E. ZEUTHEN, new Plant Engineer at Kimberly-Clark Corp.'s Kimberly, Wis., Mill bids farewell to RONALD EVANS, former Plant Engineer, who has been transferred to company operations at Kapuskasing, Ont., at a recent dinner. Left to right are JOSEPH FRYE, Program Chairman, Mr. Zeuthen, Mr. Evans and A. D. WILKINSON, Kimberly Mill Production Manager.

Southern Rumors Denied

Rumors in the Southwest that Nekoosa-Edwards Paper Co. might invest in either a new or existing mill in that area were emphatically denied by management of that Wisconsin company which officially informed PULP & PAPER that Nekoosa-Edwards has not been interested in, nor discussed, either prospect.

Dryden Expansion

Dryden Paper Co. at Dryden, Ont., is planning an expansion program to lift production capacity from 60,000 to 80,000 tons of kraft pulp. The initial development, estimated to cost some $3,500,000 altogether, includes a new recovery and evaporator plant, steam plant, additional digesters and paper machine changes.

Wage Boost Trends In West and South

An 8-cent wage increase has been accepted by many mills in the South.

A number of Wisconsin mills have upped wages 3 or 4 cents, or also 5%, and have granted additional holidays.

The U. S. Wage Stabilization Board has approved a 7 cent an hour wage increase, retroactive to June 1, 1951, for 17,000 employees of 35 pulp and paper mills in California, Washington and Oregon. Night differentials were increased 2 cents per hour.

Wages Up in South

U. S. Wage Stabilization Board action has effected an 8 cents per hour increase in a new labor contract between International Paper Co. and the AFL Paper Makers, Pulp, Sulfite Workers and Electrical Workers unions for Southern Kraft mills. The board had to approve 5 cents of the 8 cent raise.

Ten mills in six states were involved. The mills are at Camden, Ark., Georgetown, S.C., Moss Point and Natchez, Miss., Panama City, Fla., Springhill, La., two in Mobile, Ala., and two at Bastrop, La.

Olin Pulp Mill May Be At Huttig, Ark.

Olin Industries, Inc., new pulp mill to result from its stock exchange with Frost Lumber Industries, Inc., Shreveport, La., may wind up at a site near Huttig, Ark., or Farmerville, La., according to trade discussion of the five locations considered as possible. These two sites are located adjacent to the excellent Union Sawmill Co. timber holdings acquired in the deal.

Status of Other Expansion in the South

ROME KRAFT CO., Delaware chartered subsidiary of The Mead Corp., is placing orders for principal equipment for its new 600 ton board mill, to be erected on a 700 acre site on the Coosa river, 10 miles from Rome, Ga.

BOWATER PAPER CO. is reported in Southern circles as having been accorded a green light on its projected newsprint mill near Charleston, Tenn.

BIRD & SON, INC. mill expansion work at Shreveport, La., where capacity is being doubled, will not be completed until April or later. Some of the changes involved will not be accomplished until toward the end of 1952.

SCOTT PAPER CO. has definitely dropped any plans for a pulp mill at Evadale, Texas, which was expected after it acquired the 600-tons-a-day Soundview mill in the West.

Steel To Be Available

Recent developments indicate the steel shortages will be greatly relieved within a few months, giving great impetus to much mill expansion now under way or projected.

CROWN Z'S TOP OPERATIONS EXECS



REED O. HUNT (left) elected Vice Pres. PETER T. SINCLAIR (below left), Asst. Vice Pres. for Paper Mfg., EINAR W. ERICKSON (below right), Asst. V. P. for Pulp Mfg.





Reed O. Hunt, with Crown Zellerbach Corp. for 24 years and, since 1947, the assistant general manager of all manufacturing operations of the company, was promoted to vice president by action of the board Jan. 24. He is 47 years old.

Mr. Hunt joined Crown Zellerbach as assistant office manager for the Port Angeles, Wash., plant in Aug. 1927. Later he served as office manager at West Linn, Ore., and in the same capacity at Camas, Wash.

In 1943 he moved to San Francisco as assistant to the late Albert Bankus, vice president in charge of manufacturing. In 1947 he was named assistant general manager of manufacturing. In 1943 Mr. Hunt was made secretary of the post-war planning committee, actively participating in the whole expansion program since the war. He has a detailed knowledge of all the primary manufacturing plants and products and is well acquainted with other phases of company operations, including its Canadian subsidiary, Pacific Mills, Ltd.

E. W. Erickson and P. T. Sinclair were elected assistant vice presidents of the company at the same meeting. Mr. Erickson has been with the company 32 years, including 15 years as resident manager of the Port Townsend, Wash., plant. In 1950 he became assistant manager of pulp manufacturing at the San Francisco headquarters of the company.

Mr. Sinclair has been in the corporation 23 years, including several years as resident manager at the Carthage, N.Y., plant, and as resident manager at the West Linn, Ore., plant. Since 1950 he has been serving as assistant manager of manufacturing for paper.



D. S. CONEY (left), appointed Res. Mgr. of newly built Crown Williamette Converting Division of Crown Zellerbach Corp. at San Leandro, Calif., and C. KENNETH McCOURT (right), appointed Supervisor of Mill Purchases, Crown Zellerbach Corp., newsprint mill, Port Angeles, Wash.

Mr. Coney, graduate of U. of Calif., joined C-Z at Port Townsend, Wash. in 1935 as laborer; was Personnel Supervisor there in 1939, and after 4 years army service including overseas, rejoined C-Z at San Francisco. He went to West Linn, Ore., as Asst. Personnel Supvr. in 1947 and became Supervisor in 1949.

Mr. McCourt, born in Sequim, Wash., joined Crown in 1934 in Port Angeles. He was Office Mgr. at Neah Bay logging division, returning to Port Angeles in 1946 as Senior Accountant. He served in the Navy four years and is married and has two children.



LEWIS SPICER (left), appointed Personnel and Safety Supervisor, Port Angeles, Wash., Div., Crown Z., and MERLE CASHMAN (right), former Personnel and Safety Supvsr., Port Angeles, transferred to West Linn, Ore., one of C-Z's largest mills as Asst. Personnel and Safety Supervisor. GEORGE LAHUSEN has been made Supervisor at West Linn, moving up from Assistant.

Mr. Spicer has been with C-Z since 1936 after attending U. of Wash., his father being veteran operator at the mill. More recently Lew Spicer has been Supervisor of Mill Purchases at Pt. Angeles. Born in Camas, he served in Marines. Has wife and two sons. Mr. Cashman was born in Port Angeles, joined C-Z in 1929. Also has wife and two children. Served three years in Coast Guard.

R. A. MCDONALD TAKES HIGH U.S. POST: JACK HANNY RETIRES

As this issue went to press, word was received that:

Richard A. McDonald, chairman of the executive committee, Crown Zellerbach was summoned to Washington, D.C. as the assistant administrator of NPA. He has charge of the important Industrial and Agricultural Equipment Bureau.

Also, that Jack Hanny, now living in San Francisco, vice president in charge of all Crown Z operations, has retired under the company retirement plan. Long a top key man in operations, he formerly managed Crown's big Camas and West Linn mills.

Mr. McDonald was former executive v. p. of Crown; also director of Crown, of Fibreboard Products and a former president of Western Waxed Paper Co.

WASHINGTON CHANGES



Widely known in all regions where pulp and paper is made, Albert G. ("Buff") Natwick (shown in picture) has been "loaned" to the government for one year to be director of the Raw Materials Branch of the Pulp, Paper and Paperboard Division of the National Production Authority in Washington, D. C. Under his direction are Woodpulp, Waste Paper and Chemicals Sections serving this industry. He succeeds A. Murray Howe, former president of Champion-International Paper Co., who returns to New England.

On leave from his position as assistant resident manager of Crown Zellerbach's biggest mill at Camas, Wash., he becomes the first operations man from the western industry summoned to the capital. Crown Z's vice presidents, Alexander Heron, who has been serving in labor problems, and G. J. Ticoulat, who heid several high posts, most recently as DPA deputy administrator for international problems, have returned to San Francisco.

And after serving a year as chief of the Office of Price Stabilization's Paperboard and Paper Products Section, N. M. Brisbois, former vice president in charge of operations, Fibreboard Products Inc., also has returned west and is now beginning his retirement in San Mateo, Calif.

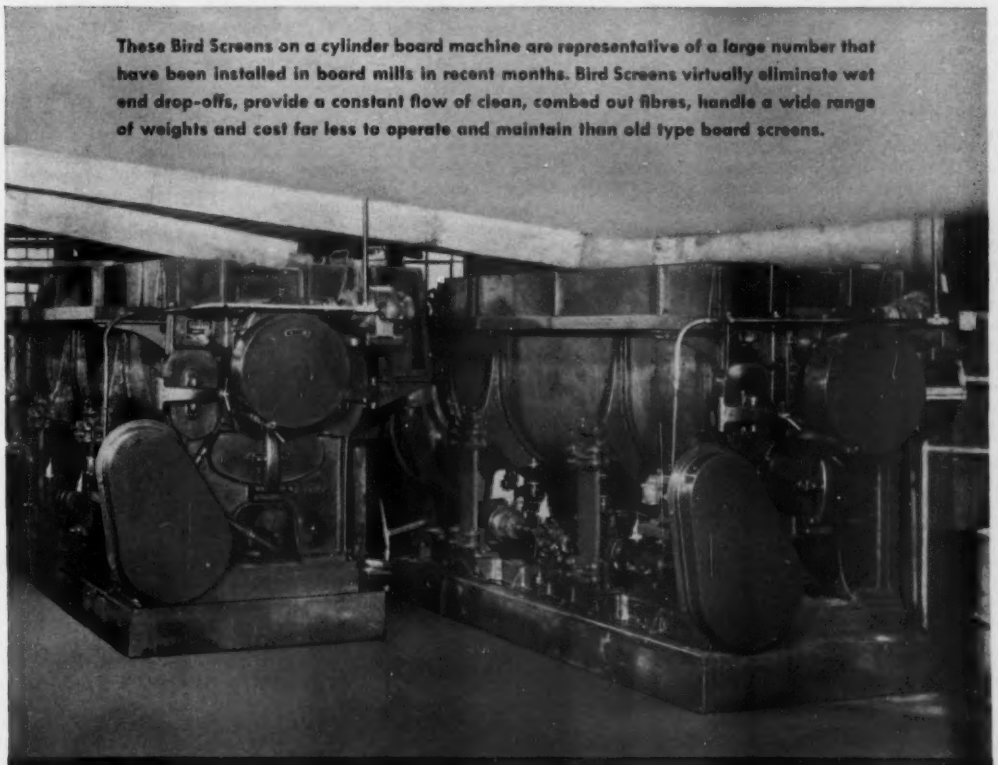
Mr. Natwick was born in Centralia, Wis., now Wisconsin Rapids, and his wife, the former Cecile Eggert, is from the same locale. They have turned their Columbia River farm and livestock over to a caretaker and have taken an apartment in the Windsor Park Hotel, 2300 Connecticut Ave. N.W., Washington. Two of Buff Natwick's five brothers are in the industry—John Natwick, superintendent at Central Paper Co., Muskegon, Mich., and Vernon an operator in the kraft mill at Camas. A son, Ben F., represents Appleton Wire Works on the west coast and several relatives are in the Wisconsin mills.

Buff Natwick graduated from Chicago University and entered the lab at Nekoosa-Edwards Paper Co., working up to night superintendent at Port Edwards, Wis. Then he went to the Howland, Me., sulfite mill for three years, then to Merriton, Ont., where he advanced to mill manager of Lincoln Pulp & Paper (now Alliance Paper Mills).

He moved west in 1929, to be technical director at Camas. He had an important role in organizing the technical work there and in 1934 he became assistant manager at Camas. Frank Drumb is manager and George Charters is the other assistant manager. Mr. Natwick's duties have particularly centered in development of quality and pulp and paper production. He is dean of the widely known college-accredited Crown Williamette Paper School at Camas, a position he held throughout its 19 years existence.

100,000,000
POUNDS OF PAPER PER DAY
are screened by
BIRD SCREENS

in order to assure continuous production of uniformly clean, well formed paper at maximum machine speed



These Bird Screens on a cylinder board machine are representative of a large number that have been installed in board mills in recent months. Bird Screens virtually eliminate wet end drop-offs, provide a constant flow of clean, combed out fibres, handle a wide range of weights and cost far less to operate and maintain than old type board screens.

BIRD MACHINE COMPANY

SOUTH WALPOLE • MASSACHUSETTS

CPPA'S 39TH MEETING

CANADA NOW NO. 1 PULP EXPORTER



NEW CPPA CHIEFS:

E. M. LITTLE (left), new Chairman of Canadian Association and D. W. AMBRIDGE (right), new Vice-Chairman. Mr. Little is President of Anglo-Canadian Mills, Anglo-Newfoundland Development Co. and Gaspesia Sulphite. Mr. Ambridge, who heads Abitibi and Provincial Paper, retired as Assn. Chairman and carries on, as is customary, as Vice Chairman.

In 1951, Canada, which for years has been the largest exporter of newsprint, became also the leading exporter of woodpulp in the world.

This statement by R. M. Fowler, president of the Canadian Pulp and Paper Assn., highlighted the 39th annual meeting of CPPA at the hotel Mount Royal in Montreal in January, and the 38th annual meeting of its Technical Section. Over 1500 industry members attended the meetings.

Canada's pulp exports, said Mr. Fowler, increased from 1.8 million tons in 1950 to 2.3 million tons in 1951. Of the total exports, approximately 10% went to Britain and about 10% to other markets overseas. The remainder went to the United States. Total Canadian production of woodpulp was more than 9.1 million tons.

During recent years, Canada and Sweden have come close in amount of pulp exports. However, with 1951, Canada's jump to 2.3 million tons passed Sweden whose 1951 exports were approximately 2.0 million tons. Canada's woodpulp exports were made up approximately as follows: Sulfite—1,174,700 tons; sulfate—714,867 tons; other chemical—32,892 tons; groundwood—321,897 tons.

Elections

Elliott M. Little, president of Anglo-Canadian Pulp and Paper Mills Ltd., Quebec, was elected chairman of the executive board of CPPA for 1952. D. W. Ambridge, president, Abitibi Power and Paper Co. Ltd., and H. S. Foley, president, Powell River Co. Ltd., were elected vice chairmen; and C. R. Whitehead, Montreal, honorary vice chairman.

Mr. Little is also president of Gaspesia Sulphite Co. Ltd. and Anglo-Newfoundland Development Co., and a director of Bathurst Power and Paper Co. Ltd. He has been associated with the industry since 1925 when he joined Abitibi.

Elections at the business session of the Technical Section saw H. C. Lee, assistant chief engineer, Canadian International Paper Co., named as chairman of the executive council to succeed W. W. Holland, production manager of Oxford Paper Co., who was 1951 chairman.

R. L. Fraser, assistant to the manager of mills, Abitibi Power and Paper Co. Ltd., was named vice chairman for the Technical Section, and the following were named as councillors: Dr. W. Gallay, director of research, E. B. Eddy Co.; J. R. W. Grieve, superintendent, Brown Corp.; J. B. Jones, assistant manager of manufacturing, The Ontario Paper Co. Ltd.; T. R. Moore, mill manager, Anglo-Newfoundland Development Co. Ltd.; and W. E. Soles, director and assistant general manager, Anglo-Canadian Pulp and Paper Mills Ltd.

These awards for outstanding work featured the business luncheon of the Technical Section:

The I. H. Weldon Gold Medal—To Dr. G. L. Larocque, New York Daily News, for paper on measuring printing quality of newsprint, judged the best presented at the 1951 meeting.

Technical Section Service Award—To J. C. Benny, technical control superintendent, pulp and paper division, Diamond Match Co., for his work on methods of conserving sulfur.

C. Howard Smith Gold Medal—To G. G. Sutaone, chemical engineer, Canada Paper Co., for best paper from a junior member during the year on a technical subject.

Safest Mill in Canada Award—To Consolidated Paper Corp., Grand'Mere, Que., for class A mills and to The Barrett Co. Ltd., Joliette, Que., for class B mills.

Gadget Competition—To E. A. Shields, divisional engineer, Provincial Paper Ltd., for improved winding device; and to J. C. Cowie, assistant mechanical superintendent, Mersey Paper Co. Ltd., for device to prevent paper from wrapping around last dryer on paper breaks.

Technical Papers

A fine selection of over 30 technical papers were presented. Briefly, some of the more significant papers and discussions were:

"Application of the Deculator To Fourdrinier Paper Machines"—by J. A. Smith, vice-president, Rotareaed of Canada, Ltd. The "Deculator" is a process developed by Clark & Vicario Co. within the past 5 years for completely deaerating dilute paper stock before the stock is introduced into the headbox. Early installations indicated that air-free stock behaves differently, both in the headbox and on the wire, with no foaming, less slime, fewer limps and flocs in the headbox, and a higher wet strength on the wire with higher couch vacuums.



TECH SECTION CHIEFS:

H. C. LEE (left), Assistant Chief Engineer of all Canadian International Paper Co. operations in Canada, has advanced to the Chairmanship for 1952 of the Technical Section of CPPA. Next in line in the hierarchy, the new Vice Chairman is R. L. FRASER (right) of Abitibi Power & Paper Co., Ltd. DOUGLAS JONES continues as Exec. Sec'y.

Mr. Smith listed four U. S. mills and two in Canada now operating Deculators. Location and grades are: Quebec—two newsprint mills; South Carolina—corrugating board by semi-chemical and kraft process; Ohio—bond, writing, waxing, coated book, ledger stock; Mississippi—bleached and unbleached kraft including milk bottle stock; and Louisiana—corrugating board by semi-chemical and kraft process.

The Deculator receives dilute stock, after screening, in a chamber in which is held a high vacuum. The stock is sprayed in at such high velocity that when it strikes hard surface areas air in the fibers is freed and removed by the vacuum system.

International Paper Co. has been a leader in and using the Deculator. Results indicate these advantages:

1. Elimination of headbox showers—eliminating foam, saving water—better drainage on the wire.

2. Reduction in down time—substantial reduction in lumps and slime spots. One installation showed production increase of 2.31% through down-time savings, and another showed tonnage increase of 9%.

3. Increased wet strength—higher machine speed—One installation effected increase in speed from 1280 FPM to 1370.

4. Reduction in sulfite use—In newsprint furnish, percentage of sulfite was reduced through slime reduction and formation of denser sheet.

5. Density and smoothness improved—20% increase in smoothness and 25% reduction in porosity was achieved on first newsprint installation. Other installations on high book grades found density improvements as high as 50%. On milk bottle stock, higher density and more uniform sheets were achieved.

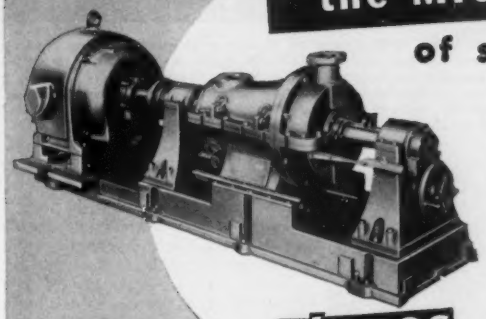
6. Formation—The absence of air from

E.D. Jones

Still

"the MIGHTY MITE"

of stock preparation



In mill after mill, the Jones High-Speed Refiner is being used as a highly versatile general utility unit . . . refining stock for high-quality ledger paper; defibering over-issue news; clearing flakes from coated book broke.

And in case after case, the report comes back: "improved stock—better control—drastic reduction in operating horsepower requirements — lowered maintenance costs."

This explains why over 900 units have been sold (not counting those by imitators!) since its introduction. Your Jones representative will tell you more about it — or write for Bulletin 1011-B.

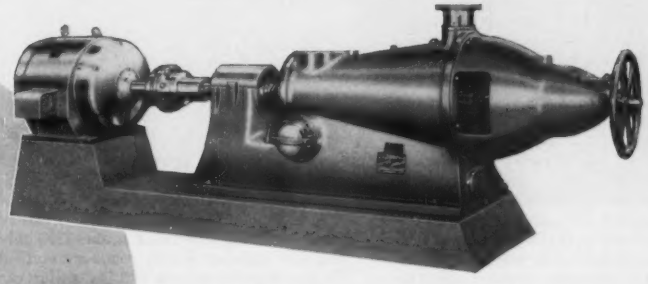
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BUILDERS OF QUALITY STOCK PREPARATION MACHINERY

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BIG BROTHER



Nearly 700 Jones High-Speed Refiners had been sold* when we introduced the FIBREMASTER—a refiner especially designed and built for mills requiring the unique features of the smaller machine, but much higher capacity.

The FIBREMASTER is the "big brother" of the High-Speed Refiner . . . duplicates its improved stock control, its flexibility, operating and maintenance economy, its versatility — but with a capacity of at least twice the tonnage.

For high-quality, high-tonnage refining, ask your Jones representative about the FIBREMASTER . . . or write us direct.

*942 as of May 1, 1951

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BUILDERS OF QUALITY STOCK PREPARATION MACHINERY

the stock makes for evener flow, and reduces tendency of fibers to re-poc.

7. Drainage and couch vacuum—Better drainage and higher couch vacuums result from air free stock. Drainage increases have been as high as 10%, and couch vacuums as high as two to three inches on newsprint.

8. Air Content of headbox stock—Air content of from 0.4% to 6% by volume in the headbox stock has been found in tests. Deculator installations indicated no air present.

The Deculator may be designed to operate with either conventional open, or with closed-type pressure headboxes. But in all installations to date it has been able to supply uniformly air-free stock to machines with advantages in operation listed above.

Acid Plant and Recovery System

"The Sulfite Mill Acid Plant and Recovery System of Spruce Falls Power and Paper Co. Ltd."—by R. H. Stafford and J. B. Frederick, Spruce Falls Power and Paper Co. Ltd. It was pointed out that the Spruce Falls mill's acid plant is a milk of lime system with a normal rate of production of approximately 230 gallons per minute. The acid analysis is 5.0% total sulfur dioxide with a combined sulfur dioxide of 3.8%.

The system contains two Paulson absorption towers operating in parallel under a maximum vacuum of 10" of mercury, and deliver acid to a pressure absorber. The pressure absorber maintains the acid strength at the desired level and makes it possible to produce system acid at the relatively high temperature of 38 degrees C. Spray coolers are employed for gas cooling the burners. The cold gas temperature is maintained as high as is consistent with the strength of system acid required.

The operation of the recovery system is entirely separated from that of the acid plant. Three absorption towers in series effectively absorb the sulfur dioxide in the digester relief gas so that the gas vented to atmosphere contains only traces of sulfur dioxide during the peak relief periods. The last of these units is a tail gas tower which uses water to absorb the remaining sulfur dioxide and the weak acid so formed is pumped to the acid plant to mix the system acid.

The tail gas tower operates at atmospheric pressure and the other two towers have a maximum pressure of 15 psi at the end of the digester blow down period. This relatively low back pressure permits the digester blow down pressure to drop to approximately 20-25 psi ensuring a good recovery of sulfur dioxide. Wet relief from the digesters is sent directly to the cooking acid tank and has no contact with the gas recovery units.

Ample acid storage capacity is provided so that short term digester or acid plant delays do not interrupt the continuous flow of acid through the system. The blending action provided by this capacity also ensures uniform cooking acid concentration from pumping to pumping.

The total recovery of sulfur from wet and dry digester relief is approximately 4200 lbs. per digester, which is equivalent to 238 lbs. of sulfur per A.D. tons of pulp. The actual sulfur consumption is approximately 185 lbs. of sulfur per A.D. ton of pulp.



SOME CANADIAN LEADERS AND SOME AMERICAN GUESTS at Montreal meeting (l to r): A. A. SCHMON, President, Ontario Paper and Quebec North Shore; R. L. WELDON, BOARD CHAIRMAN, Pulp & Paper Research Institute of Canada and Pres. of Bathurst Power & Paper; SYDNEY FERGUSON, First Vice Pres. of American Paper & Pulp Assn. this past year and Chairman of The Mead Corp.; W. H. HOWARD, General Counsel for CPPA; E. W. TINKER, Exec. Sec'y, APPA; and CHAS. H. SAGE, Pres. of Spruce Falls Power & Paper and V. P. of Kimberly-Clark.



A GREAT DEAL OF INTEREST was shown in discussion on sulfur dioxide recovery and sulfur conservation, introduced by paper presented by J. B. FREDERICK (left) and R. H. STAFFORD (right), members of Technical Department of Spruce Falls Power & Paper Co., Ltd.

Operating statistics from Spruce Falls show cooking acid strength at 7.0% sulfur dioxide, 2.55% combined sulfur dioxide, and 4.34% free sulfur dioxide. Wet relief to No. 1 accumulator—total high pressure relief including side relief equals 7920 gallons per digester. Sulfur recovery at 1330 lbs. per digester equals 73.8 lbs. sulfur per ton pulp. 200 lbs. lime per digester equals recovery of 13 lbs. lime per tons pulp. Heat content equivalent to 0.988 M lbs. steam per ton of pulp. Dry relief at No. 1 reclaimer tower gives 2360 lbs. sulfur per digester equal to 131 lbs. sulfur per ton pulp. Acid strength entering equals 5.26% total SO_2, 1.41% free SO_2.

Total chemical recovery from plant—4270 lbs. sulfur per digester; 238 lbs. sulfur per ton pulp; 220 lbs. lime per digester; 13 lbs. lime per ton pulp.

Total heat recovery from plant—20.2 M lbs. steam; 1.12 M lbs. steam per ton pulp.

During the discussion period these questions and answers were developed:

Q: What is the concentration of gas leaving top of No. 1 reclaimer tower?

A: During the peak, the gas has a concentration of 80-90% SO_2, and is at a pressure of 15 psi. This peak lasts for about 1015 minutes.

Q: What sizes are the reclaimer towers?

A: The primary tower is 23 feet high and 7 feet in diameter. No. 2 is 10.5 feet parked section, and 6.5 feet diameter.

Q: Do you make any attempt to measure SO_3?

A: We measure SO_3 in the system acid only—not the gas—and it runs about 1 gpl.

Q: What is the percentage yield of the digesters?

A: The yield runs 48-49%. It should be remembered we use a high percentage of black spruce.

Q: What is the blowdown time and how long does it last?

A: Our cooks are 7½ hours long and we start the blowdown 5¾ hours after steaming. So the blowdown lasts 1¾ hours.

Q: Do you weigh chips to the digester?

A: No. We weigh chips to the chip bins but have no measure of the weight of chips to the individual digesters.

Q: Can you give us any indication of sulfur savings?

A: In 1938 before the present system was installed the sulfur consumption was 275-285 lbs. per ton. The changes in the system to the present one brought this down to 218-220 lbs. Learning how to use the system lowered the use to 185-190 lbs. A.D. per ton of pulp produced.

Paperboard Group Discusses Problems

Board Committee—Technical Section: D. H. O'Brien, Anglo-Canadian Pulp & Paper Mills, and chairman of the Board Committee of the Technical Section, led his group through an interesting three days on problems of board manufacture. PULP & PAPER presents here its running account of some the highlights.

L. M. Morgan, Brompton Pulp & Paper Co., and chairman of the "Screen Questionnaire" for the committee, and H. W. Downs, Jr., Union Screen Plate Co. of Canada, Ltd., led the part of discussion dealing with screen plate study, carried out to compare the screening efficiency of flat screens with plates slotted parallel to stock flow, to flat screens with plates having slots at right angles to stock flow.

It was found that parallel slots were superior to across-flow slots in screening capacity per plate. Also a large amount of good fiber was rejected with the dirt in the across-flow plates. Where Style B plates are used under scraper, .020-.026 slots are recommended with 4-5 slots per inch. On flat screens, stainless or Inconel should be used and is used wherever possible now.

Cylinder Machine Problems

In the cylinder machine questionnaire discussion on attempts to increase cross-directional strength, it was suggested a wider vat circle at same speeds seems to have good effect, and that use of fewer cylinders with heavier coverage as opposed to multi-cylinder increases this strength. Higher stock consistency was also

(Continued on Page 96)



CHECK AND DOUBLE CHECK To assure smooth production schedules, essential material must be on hand at the right time. Above, Vice-President Bill Goodwillie (*center*) and Sales Correspondent Keith Looker (*left*) follow the progress of a major "rebuild," with Russ Olson, Chief of the Service Department. Meticulous follow-through helps build high-speed, high-production Beloit paper machines.—*Beloit Iron Works, Beloit, Wis.*

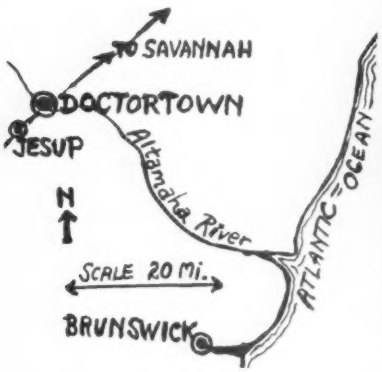
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PAPER MACHINERY

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NEW RAYONIER MILL

Georgia Plant to Use Soft and Hard Woods by May, 1954
Special Process Developed at Shelton Laboratories



Rayonier Incorporated has announced plans for early construction of a new pulp mill at Doctortown, Ga., capable of producing 250 tons per day of purified wood cellulose. A mill site of 530 acres (see our map) has been purchased and construction will be started soon. PULP & PAPER was officially advised it will be completed by May, 1954.

Clyde B. Morgan, president, stated that application has been made to NPA for a certificate and allocation of materials. Proceeds from the recent borrowing of $40 million from the Prudential Insurance Co. will be used in part to finance this project, which will constitute an investment in excess of $25 million.

Rayonier owns and operates three mills in Washington and one in Florida, which combines annual capacity of approximately 430,000 tons. This fifth mill has annual capacity of 87,000 tons.

A considerable enlargement of Rayonier's capacity is going forward at the present time in a $6 million special construction program at the four existing mills. This is to be completed in 1952.

An advantageous location for the new mill was selected in Southeast Georgia, on the Altamaha River, 38 miles from the sea, in an area where there is abundance of both surface and ground water. Doctortown, near Jesup, is served by the main line of the Atlantic Coast Line Railroad, with radiating rail connections and highway approaches affording economical transport of pulpwood from surrounding area.

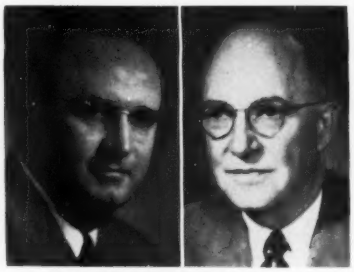
The mill will use an improved process for superior pulp grades primarily for high tenacity yarn applications, such as tire cord, parachute materials, and rubber belting. Flexibility is provided in mill design, so it will also be able to produce nitration pulp if necessary for explosives, as well as pulps for special types of paper and standard textile yarns.

Rayonier recently enlarged its already substantial wood resources in the South, built up to support the Fernandina Division. Large acreages have been purchased this year, and today, the company owns or controls approximately 400,000 acres in southeastern counties of Georgia and northeastern counties of Florida.

Approximately 550 cords of wood will be consumed per day. Part will be purchased. The mill is designed to use all local species of pine, as well as local hardwoods.

Approximately 450 will be employed in the mill and another 400 or 500 people in cutting and transport of pulpwood.

The Doctortown project will be carried out under executive direction of R. F. Erickson, vice president in charge of engineering and plant development. Special processing procedures were developed by Rayonier's Research Division (Shelton, Wash.) under Dr. A. N. Parrett, vice president in charge of research and development. Designs for processing equipment have been prepared by Rayonier's own engineers, and Ebasco Services, Inc. has been retained to design the mill structurally.



RAYONIER OFFICIALS

JAMES T. SHEEHY (left), elected Executive Vice President, and ARTHUR N. PARRETT (right), named Vice President in charge of Research and Development of Rayonier Inc., according to Pres. Clyde B. Morgan. Mr. Sheehy, who is in New York, has been a Vice Pres. since Apr. 1950 and was former Manager of Rayonier mills at Fernandina, Fla., and Hoquiam, Wash., and headed up Engineering. Dr. Parrett, in Shelton, Wash., heads the Central Research Division there, employing about 120 persons. He was with Rayonier and predecessor company since 1932, formerly was in chemical research with DuPont and A. O. Smith.

Rayonier Mill After A Safety Record

The Port Angeles, Wash., mill, Rayonier, Inc., Harry Thurlow, resident manager, was in the midst of a no-disabling injury run dating back to May 1951 and was still going strong, as this issue went to press. As it entered February of 1952, it has operated over 260 days, or about 900,000 man-hours with an unblemished record.

Zonner is Exec V.P. Of Bagley & Sewall



William A. Zonner (shown in picture), who has had many years experience in paper production and paper machinery and specialized for years in production of on-machine coated papers, has joined Bagley & Sewall Co., Watertown, N. Y., as executive vice president. The position is newly created because of frequent absences on business of Abe Cooper, president.

Mr. Zonner was with St. Regis Paper Co. the past 3½ years, most recently as liaison officer between manufacturing and sales, working out of New York City. Prior to that he was general manager of all their printing paper mills in New York state, after a short time as resident manager of the 6-machine mill at Deferiet, N. Y.

Born in Chillicothe, O., Mr. Zonner was department superintendent for The Mead Corp. there, and in 1935 went to Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis. He was with these major paper companies in their pioneering of high speed on machine coating of magazine paper.

In 1945, Mr. Zonner went with Appleton Machine Co. as sales engineer and was with that company until he joined St. Regis July 15, 1948.

Sulfur Continues Short

The world shortage of sulfur, which became pronounced as 1951 wore on, will become worse in 1952 as the rearmament program gains momentum, Langbourne M. Williams, Jr., president of Freeport Sulphur Co., predicts. Despite record production, discovery of a large new deposit and projects to develop three others, "any significant increase in the overall supply is at least a year away," Mr. Williams said.

Rauschert Asst. Mgr. At Grays Harbor

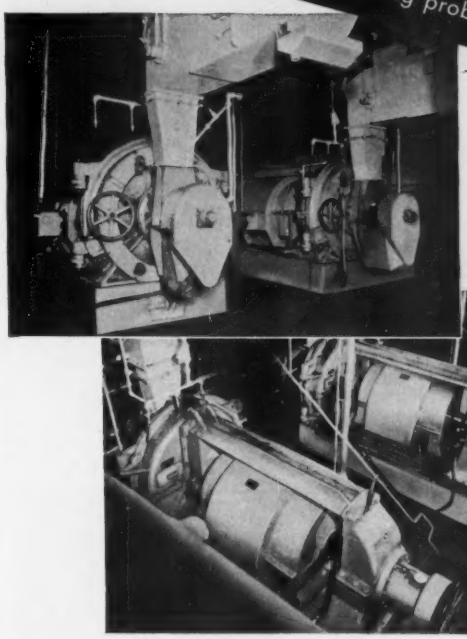
President C. B. Morgan of Rayonier Inc. announces promotion of Bryan L. Rauschert, former plant engineer at the Port Angeles, Wash., mill to assistant resident manager of the Grays Harbor, Wash., Division. Graduate of the University of Washington in 1930, he had worked at the Harbor mill before serving as Army Chemical Warfare captain in World War II.

Harry Thurlow, resident manager at Port Angeles, announced promotion of Donald Lawson, Washington State College grad, 1937, from assistant to plant engineer at Port Angeles. Fred Stolz, University of Wisconsin 1932, for some years with Fort Howard Paper Co., Green Bay, Wis., is new assistant plant engineer at Port Angeles. He had been in Central Engineering in Hoquiam, Wash., the past three years.

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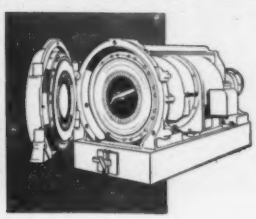
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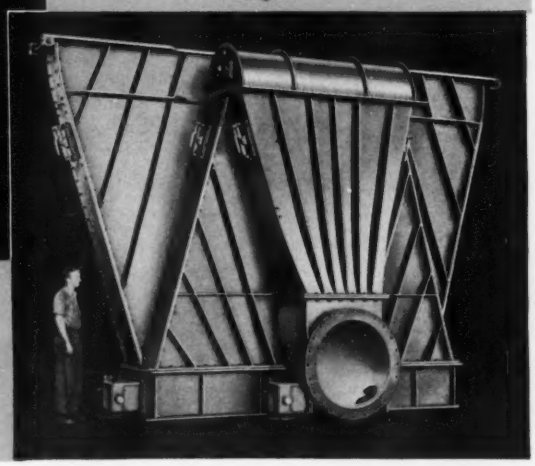
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Top, a single-pass Puseyjones Flow Spreader for narrow and medium width machines.
Center, a three-pass Puseyjones Flow Spreader for medium width machines.
Right, a three-pass Puseyjones Flow Spreader for wide machines.

SAFETY IS A SCIENCE

A CHALLENGE FOR COAST GROUP



PRINCIPAL SPEAKERS AT LABOR-MANAGEMENT CONFERENCE, l. to r.: J. D. ZELLERBACH, Pres., Crown Zellerbach Corp.; OREN PARKER, Field Rep., Pulp, Sulfite Union, and HARRY L. WOLLENBERG, Pres., Longview Fibre Co.



AL E. BROWN, (left), Vice President of the Paper Makers, AFL, and Co-Chairman of Pacific Coast Labor-Management Safety Conferences, and BOYD K. WICKWIRE (right), Personnel Manager of Longview Fibre Co. and General Chairman of the 1952 Conference in Washington State, point to frequency rate lines which show the amazing reduction in accident frequency in the Far West—regarded as directly attributable to the annual conferences which began in June 1946. The dark line shows how Washington State (22 mills) cut its rate to less than one-quarter of what it had been; all the Coast mills (37 mills) shown by the light line, also reduced accidents by an equivalent amount.

That still-amazing prodigy of the industrial world—the unique Joint Labor-Management Safety Conferences of the Pacific Coast pulp and paper industry—reached school age this year.

But this is a really precocious "baby" of industry. For in its sixth annual series of conferences this year, it was not just working hopefully at the ABC's of safety. It took long strides toward establishing safety as a *science* of industry.

This was very clear to anyone in a position to compare the first cautious steps it took back in 1946 with the erudition and expertness of its performance in its first big 1952 meeting in Tacoma, Wash., Jan. 24-25. And it had a wonderful record of reducing accidents to point to—*down 88 per cent for all Coast mills since the conferences began.*

The "papers" and discussions at Tacoma were of a caliber measuring up to the best efforts of any engineering, superintendents or TAPPI meetings of this industry. They revealed much original research, careful preparation and a scientific approach and attitude in tackling problems of safety.

Nearly 200 delegates participated. These included the top mill managers and superintendents, their safety and personnel directors, and a goodly number of plant engineers, as well as about an equal number of union officials from regional to local levels. They came from 22 mills in the state of Washington and they took two full days away from the pressing business of making paper and pulp to participate in this equal and joint effort to reduce accidents. Similar meetings were to follow in February and March for nine mills in California and seven mills in Oregon. And apparently every manager and every local union representative was in his seat at the conference tables from start to finish; if there were any rare absentees, they were unnoticed in the packed room.

Can They Predict Accidents?

The subjects they debated, or heard discussed, reveals the strides they have taken toward taking safety out of "baloney" category, where it still is in some industries, and lifting it to the level of other industrial sciences. For instance:

They debated what could be done about the psychology of accident-prone workers.

They heard speakers argue factually the uselessness of trying to make people safe by legislation or by punishment.

On the other hand, they heard a fine line drawn between self-discipline and punishment.

They discussed practical possibilities of reducing accidents by a more scientific selection and placement of workers.

And finally—and you can paste this one into your hatband and look for it a few years from now to see what has happened—the Pacific Coast joint labor-management safety committee was challenged to set up a real *research program* that would find the tools or means for *accurately predicting accidents,* in order that they could be avoided.

Most of these provocative points were raised by a guest lecturer, Dr. J. L. Rosenstein, a professor of the department of management, Loyola University, who conducted what amounted to a "seminar in safety." It was he who really pinned

STATE SAFETY RECORDS

For Selected Years

State	No. of Mills	Accident Frequency Rates Per Thousand Man Hours 1945	1946*	1948	1950	1951
Washington	19	35.56	31.69	14.35	8.64	8.64
Oregon	7	62.01	47.06	18.22	8.27	8.38
California	9	29.16	26.33	13.39	9.19	9.61
TOTAL	35	39.19	33.45	14.85	8.70	8.81

*First of annual labor-management conferences held June, 1946.



CROWN ZELLERBACH'S PORT TOWNSEND, Wash., kraft mill won a new award at the first of the Pacific Coast Labor-Management Safety Conferences—a plaque awarded by the sponsoring unions and manufacturers' association for the best safety record over a period of five years in the State of Washington. Tops for entire Coast was Fibreboard at South Gate, Calif., and leader in Oregon was Crown Z in Lebanon.

LEO ZIEL, Resident Manager at Port Townsend, is in the center of this group holding the plaque. Unless otherwise identified, these are all Port Townsend employes in the picture:

L to R, seated: TOM WADE, Asst. Personnel Director; BILL MAXWELL, Multiwall Bag Plant Asst. Supt.; HARLEY KNOTT, Pipefitter Lead Man. L to R, Standing: HAROLD QUIGLEY, Paper Mill Supt.; GOV. A. B. LANGLIE; DON L. OSBORNE, Personnel Supervisor; ROBERT NOTT, Pulp Mill Foreman; MR. ZIEL; SID W. GRIMES, Portland, Ore., Secretary of the Coast Assn. of Pulp & Paper Mfgrs.; IVOR D. ISAACSON, Los Angeles, Vice Pres. of Pulp, Sulfite & Paper Mill Workers; FRANK KILHAN, Pulp, Sulfite local; BERT TUTTLE, Paper Makers local; AL BROWN, Vice Pres., Paper Makers.

the conference down to the problems of psychology, and he sounded the challenge:

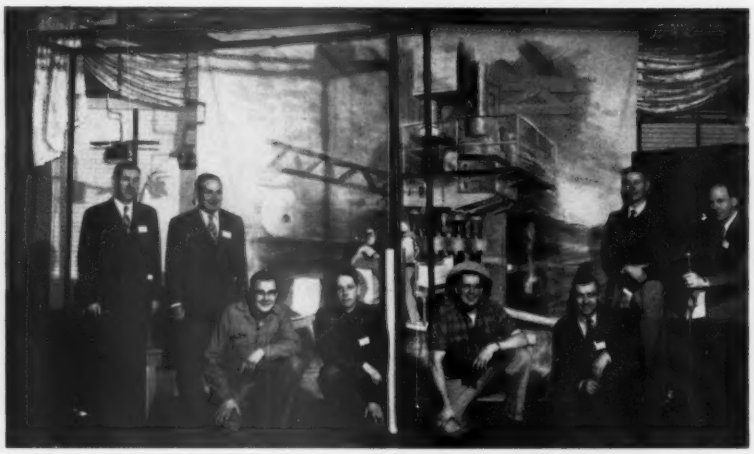
"Why shouldn't this conference committee develop a research program that will be able to predict accidents and provide the means of avoiding them? I believe it can be done." For one thing, he suggested tests might show at what stage of fatigue a worker may get hurt.

He it was who asserted "no amount of punishment is going to correct instability in a worker." He suggested better selection and placement of workers, and both management and union leaders at the meeting told PULP & PAPER they accepted this suggestion as one that would not violate any contractual rights of unions if handled intelligently and correctly.

For instance, he said the "day-dreaming" worker must not be given a job of watching an overflow gauge; instead he should be in an assembly line where other workers will keep him "awake." Would it follow that the "smart aleck" or "show-off" should be given a job alone—away from an audience, so he won't get hurt, too?

Dr. Rosenstein urged employment of psychologists in industry, to recruit and train workers, because "80 percent of accidents are caused by human factors." He said "28 per cent of your workers are chronically-emotionally disturbed and accident-prone."

He urged that in our schools, right from the very first grades, a place should be found for teaching industrial citizenship, "the duties and responsibilities of employers, unions and workers to each other, and of all three to the community," and this, he said, should include the teaching of industrial safety as a "way of life."



RAYONIER INC. Grays Harbor Div., presented a "hit" playlet at the Labor-Management Safety Conference depicting how they indoctrinate a new employee in safety. ROBT. M. GILMORE (left), Gen. Safety Director of the company, was principal writer, director, etc. Next, l. to r., are the actors: C. HILARY OBERT, Asst. Paper Mill Supt., William BELL, Asst. Resident Engineer; GRAHAM MERCER and JAMES EDINGER of the unions, ROCKY LINDELL, Pulp Finishing & Warehouse Supt. JACK GUDGER, Safety Supervisor, and GEORGE McKAY, Personnel Manager. Mr. Mercer played role of doctor and was "stand-in" for all other actors. Mr. Edinger was the star—the indoctrinated employe. Others played parts similar to their positions in the mill, except Mr. McKay, who was narrator—explaining scenes, pantomime, etc.

Zellerbach Rates Safety High

As final speaker on the Tacoma program, J. D. Zellerbach, president of Crown Zellerbach Corp., testified to the fact that management considers safety as a science, and a cost factor calculated in long-term planning. "Safety is now a part of engineering, of building, of financing," he said. "Safety money is woven into the design of each new building, each new or remodeled machine, each new facility."

He recalled that "this joint effort was not accomplished under government compulsion" but "because you union men wanted a cooperative program and management agreed to go along. . . . Together, management, unions and workers have demonstrated that this business of safety improvement works, and it is safer today to be in a Pacific Coast mill than on a highway or a home—one out of 37 persons are hurt in homes, only one out of 55 in Coast mills."

The conference has done such a good job of reducing the accident rate in the mills—from 39.19 frequency per 1,000 man-hrs. in 1945 to 8.81 in 1951 for 35 Coast mills—that this year it decided to hold a panel discussion on "Safety in the Home." Union representatives under John Teevin of the AFL Paper Makers, gave a series of "papers" on home safety that could be compared with the best

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THE GOVERNOR'S TROPHY for the best safety record of 22 Washington State Mills in 1951 went to Longview Fibre Co., Longview, Wash., with a frequency of 3.08 accidents per million man-hours worked. Here are the winners' representatives (also the winners in 1949) with the Governor: l. to R, seated: JOHN CLARKE, Foreman; GOV. A. B. LANGLIE; B. K. WICKWIRE, Personnel Mgr. L. to R, standing: NORMAN HESS, Paper Makers local; CHARLES SENK, Personnel Dept.; RUSSELL GRAFF, Asst. Pulp Supt.; GUY UHLIG, Shift Chemist; LOUIS STULGIS, Bag Factory Foreman; DICK MULLEN, Safety Engineer; WAYNE HARDWICK, Pulp, Sulfite union local; ROLAND LYONS, Paper Makers local; HENRY DAUTERMAN, Asst. Paper Mill Supt.

technical papers this industry has produced—the union men spent many hours of their own time. in their homes, in original study and preparation.

Rayonier Play Impresses

Another performance on the same high standard as these "papers" was a well-acted, thoughtful play, written and staged by management and labor representatives of the Grays Harbor Division of Rayonier, Inc. Principal author and the director of the performance was Robert M. Gilmore, general safety director for all Rayonier mills. A picture of performers and their stage scene accompanies this article.

The play showed how thoroughly a new worker in Rayonier is indoctrinated in safety—carrying through his interviews with doctor, safety supervisor and superintendents, his instruction as he goes on the job operating an automatic pulp baler. It sparkled with many little gems of safety instruction and it ended on the note: "The more you know about safety, the better chance you have of getting out of here without being hurt."

Some of the safety points brought out: Tagging shut-down machines with name of only man permitted to start it up. Don't "play" with compressed air or clean clothes with it, and always wear goggles when using it. The conception of *every* employe being in the mill safety *organization*, whether he is on the committee or not. And rotating committee memberships. Strict rules to report even the most trivial injury. Keeping floors clean of wire or paper around a machine. The follow-up safety interview for new employes 30 days after they go to work. The specific invitation to a new employe to report hazards that oldtimers don't notice.

Another group performance at Tacoma was a panel discussion of workmen's compensation laws with state officials serving. Otto R. Hartwig, who this year will reach retirement as Crown Z's general safety supervisor, was moderator. Incidentally, Mr. Hartwig, was paid high tribute for his years in the work and as first co-chairman of the conferences with John Sherman, Paper Makers v. p. Mr. Sherman, in Washington, D.C., expediting the accepted wage increase for coast workers, was unable to attend.



CLYDE W. KING (in foreground), Manager, Dept. of Public & Industrial Relations, Fibreboard Products Inc., San Francisco, was Toastmaster of Safety Group banquet. Behind him, l. to r.: OTTO HARTWIG, Crown Z, presented a service award; DR. J. L. ROSENSTEIN, who made most provocative address of meeting, and JOHN TEEVIN, Paper Makers, who headed Home Safety panel.

Co-Chairmen Have Delicate Tasks

A word should be said for the co-chairmen of this conference—a task taken over this year by Al E. Brown, also a v. p. in the Paper Makers, and Sid W. Grimes, secretary of the Pacific Coast Association of Pulp and Paper Manufacturers, both former Port Angeles mill men, now stationed in Portland, Ore. They were to perform these similar chores at all three Coast meetings, an assignment that required experience and tact in keeping the meetings on the beam of a real joint safety effort, and skirting away from unrelated subjects or controversies, as well as issues that more properly belong on the agenda of the annual collective bargaining conferences.

As usual at these conferences, they had expert help in keeping the conference on the beam with the customary opening statements of objectives.

Objectives—by Parker, Wollenberg, Wickwire

Opening the meeting, the state chairman, Boyd K. Wickwire, personnel manager at Longview Fibre Co., noted that the basic purpose was "consideration of safety education, accident prevention and first aid" and that "it was *not* to be a sounding board for local plant disputes or grievances." He then turned the meeting over to Mr. Brown and Mr. Grimes, and Mayor John Anderson of Tacoma welcomed the delegates.

These ideals were stressed again by Oren Parker, in the opening address for labor. Field rep. for the Pulp, Sulfite & Paper Mill Workers AFL, he worked in the Vancouver, Wash., mill for 20 years.

"We do not desire to use legislation, as long as we can make progress through education," said Mr. Parker. He called the industry second largest in the state, and said: "The personal interest exemplified by top management and by top officials of the two international unions, filtering down the line, has made our safety program really click."

He declared the unions were genuinely interested, "but should there be any isolated case of a union giving only lip service, or failing to cooperate, we want to know about it and will take steps to correct it."

Opening for management, Harry L. Wollenberg, president of Longview Fibre, who for 25 years has participated in every Coast collective bargaining conference, helping to draft its agreements, said:

"Man, by nature, is an unsafe creature —curious, venturesome, reckless. Our instinct of self-preservation is dulled by our sheltered existence.

"Youngsters may be reckless; we oldsters sometimes are tired or bored. All of



contact is important



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RANDOM EXPOSURES at Tacoma Conference (l. to r.): C. A. BUCKLAND, Pres. of Inland Empire Paper Co., Spokane; LEO S. BURDON, Asst. V.P., Soundview Div. of Scott Paper; ROBERT R. HETHERINGTON, Pulp & Sulfite Workers, Portland; KEN LARKIN, Personnel Dir., Weyerhaeuser Pulp, Longview; R. A. LAWRENCE, Personnel Dir., Fibreboard, Port Angeles, and N. W. COSTER, Gen. Supt., Soundview Div. of Scott Paper.

us need to be repeatedly impressed with hazards and ways to avoid accidents."

He once thought "all these charts and statistics and programs" could be simplified or even largely eliminated, but added: "Now I know I was all wrong." Twisting a well-known adage, he said: "Now we ought to be able to teach a child to avoid fire without the need of his finding it out by getting burnt."

A "good" safety record, not a perfect one, is a fair objective, he said, otherwise "we would have to stifle all progress." He declared he did not believe those who claim a perfect record over a long period where many people and many hazards are involved.

A report on progress of Washington state mills was made by J. F. Robertson, safety supervisor for Crown at Camas, who pointed out the 22 mills in the state had reduced their frequency rate from 39.19 in 1945 to 8.70 in 1950 and maintained almost that level with 8.81 in 1951. There is still room for improvement he said.

At the final banquet, with the state governor, Arthur B. Langlie, as honor guest, and Clyde King, director of public and industrial relations for all Fibreboard mills, presiding, awards to mills were made. An entertaining inspirational speaker was R. A. "Dutch" Derr, of Stockton, Calif.



MEN FROM VARIOUS MILL DIVISIONS were at Tacoma (l. to r.): JACK B. ROBERTSON, Safety Supvsr., Crown Z, Camas, one of speakers; EVAN WOOD, Personnel & Safety Supvsr., Weyerhaeuser, Everett; DON LAWSON, new Plant Engineer, Rayonier, Port Angeles; DR. PAUL SCHLOSSER, executive of Central Research Rayonier, Shelton; PAUL F. PETERSON, Asst. to Gen. Mgr., Everett Pulp & Paper Division of Simpson Logging Co., and LOUIS SLOSS, former mill employee at West Linn, now Asst. Sec'y, Pac. Coast Assn. of Pulp & Paper Mfgrs., Portland, Ore.

BEST 1951 SAFETY RECORDS

The Governor's trophy for the best safety record for a year—1951— was won for the second time by Longview Fibre, winner in 1949. Its accident frequency rate for 3,575,624 man hours was 3.08 per 1,000 man hours. On the Pacific Coast this was topped only by one mill, the Fibreboard mill at South Gate, Calif., which came through with a perfect record for 493,360 man hours. Next best 1951 records for all three states follow:

Co.	Town	Thousands of Man-hrs.	Frequency Rate
Rayonier, Port Angeles		1,252	3.19
Crown Z, Pt. Townsend		1,697	3.54
Crown Z, Camas		5,444	3.67
Longfibre, Los Angeles		441	4.53
Rayonier, Shelton		1,068	4.68
St. Helens (Ore.) P & P		1,269	4.73
Fibreboard, Sumner		629	4.77
Fibreboard, Vernon		1,328	5.27
Weyerhaeuser, Longview		1,309	5.35
Weyerhaeuser, Springf'd		600	6.67
Crown Z, West Linn		2,728	6.97
Rayonier, Hoquiam		1,703	7.63
Crown Z, Los Angeles		513	7.79
Crown Z, Lebanon		375	7.99
Fibreboard, Portland		473	8.45
Publishers, Ore. City		1,585	8.84
Pacific P'd, Longview		692	8.67

There were many other low ones for the year—in the 9, 10, and 11 categories and a grand total of 31 Pacific Coast pulp and paper mills were below the 20-mark. There was a bad jump then and the four remaining Coast mills had frequencies between 30 and 36.

A new trophy was awarded at Tacoma, sponsored by the two unions and the manufacturers' association—a trophy for the best record for a five year period. Ivor Isaacson, v. p. of the Pulp, Sulfite and Paper Mill Workers, presented the Washington state award to Leo Ziel, resident manager, for the Crown Z mill at Port Townsend.

In accepting it, Mr. Ziel said: "There are 140 people who are walking around our little town of 6,000, fit and whole, because of the reduction we made in our accidents."

Here's the new five-year competition record (showing the trophy winners for the other two states were to be Fibreboard's South Gate, Calif. mill, and Crown Z's Lebanon, Ore., mill):

HERE AND THERE at Tacoma Conference (l. to r.): CHARLES CARD, Plant Mgr., Coos Pulp Div., Scott Paper, Anacortes, Wash.; ABE M. JOHNSON, Director, Wash. State Dept. of Labor & Industries; RAY BAKER, Mgr., Pulp Div., Weyerhaeuser, Longview; L. O. FOX, Plant Mgr., Fibreboard, Sumner; LYALL TRACY, Dir., Public & Ind. Relations, Rayonier, Hoquiam, COL. JOHN FARLEY, Pub. & Ind. Relations, Crown Z, Seattle.

CUMULATIVE INJURY FREQUENCY
1947-1951 Inclusive

Co.	Town	Thousands of Man-Hrs. Exposure	Frequency Rate
Fibreboard, South Gate		2,231	4.03
Fibreboard, Vernon		6,855	4.38
Crown Z, Pt. Townsend		6,631	5.13
Crown Z, Camas		24,890	7.31
Longfibre, Longview		17,205	8.20
Rayonier, Pt. Angeles		6,115	8.50
Crown Z, Lebanon		1,833	8.73

There were ten others under 14. All but five of the 35 mills were under 23, and those were between 28 and 30 and the five year average for all (182 million manhrs.) was 13.61. Hereafter this award will be made on the basis of most recent five years.

Improvement in the past year in mills was an interesting statistic presented by Mr. Robertson. The best in Washington was Weyerhaeuser, Longview, down 78 per cent, and Coos Bay, Anacortes, was next, down 60 percent.





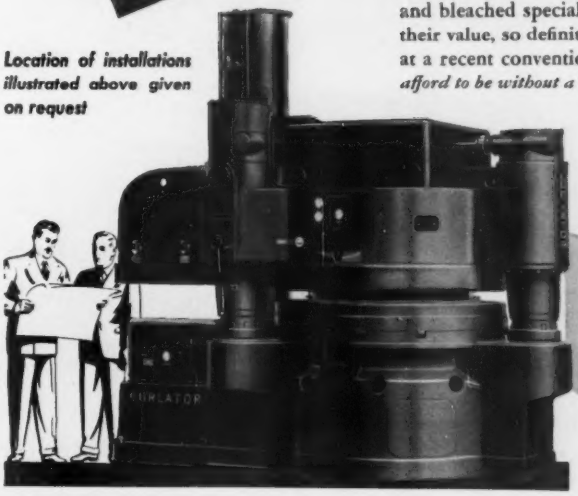
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Personals

PACIFIC COAST NOTES

WESTINGHOUSE VET



H. NORMAN MILLER, Portland, Ore., Mgr. for Westinghouse Electric Corp., who was honored with 25-yr. pin by his firm. He is graduate of Oregon State College.

HAROLD QUIGLEY, paper mill superintendent of Crown Z's kraft mill at Port Townsend, is back home from a trip that took him to many mills from M & O's on the Canadian border at International Falls, Minn., down the east coast of the U. S. and to Mobile and other central Southern mill towns.

LOUIS SLOSS, who is *SID GRIMES'* right hand in the central offices in Portland, Ore., of the Pacific Coast Association of Pulp and Paper Mfgrs., had to make a sudden departure from the pulp and paper safety meeting in Tacoma, Wash., in late January to be at the hospital in Portland, Ore., for the arrival of an addition to his family. Mr. Sloss, assistant sec'y of the association, is a Stanford grad, formerly worked at West Linn, Ore., mill.

LOREN FORMAN, formerly of the Institute of Paper Chemistry, and now head of pulp utilization work for Scott Paper Co., was a recent visitor at newly acquired Soundview division of Scott in Everett, Wash.

HUGH C. OSBORN, Pacific Coast representative of R. T. Vanderbilt Co., Paper Mill Dept., announces opening of their new office at 219 Mayer Bldg., Portland, Ore. (phone-At. 2819).

J. R. FRUM, assistant vice president, Crown Zellerbach, Portland, Ore., was elected president of Oregon Forest Fire Assn. Jan. 14

M. L. SULLIVAN, public relations manager, Columbia River Paper Mills, Vancouver, Wash., has been elected vice president of Columbia Basin Loggers.

D. S. CONEY, personnel supervisor, Crown Zellerbach Corp., West Linn, Ore., is to be resident manager of the new CZ converting plant under construction at San Leandro, Cal. He will move south in midsummer.

GEORGE LA HUSEN, assistant personnel and safety supervisor at West Linn, will become personnel and safety supervisor when Mr. Coney departs.

W. C. JACOBY, technical director, Crown Zellerbach, Camas, Wash., principal and first-year class professor of Crown Willamette Paper School, will act as dean of the school during *A. G. NATWICK'S* one-year appointment to N.P.A. *MILES CADY*, supervisor of department maintenance and assistant professor of the school's first-year class, succeeds Mr. Jacoby as professor. *HOWARD HALL*, technical assistant to sulfite superintendent, has become associate professor of first-year class.

E. DIXON HEISE has been appointed assistant to the manager of Blake, Moffitt & Towne, San Francisco division, according to *ARTHUR W. TOWNE*, vice president and general manager. For several years, Mr. Heise has served as assistant sales manager, printing paper department. He succeeds *JAMES A. GRUNER* who was advanced to the position of San Francisco division manager. *HERBERT M. CHISHOLM*, advertising manager has been named assistant sales manager, printing paper department.

DR. R. W. KENNTH ULM, formerly on the staff of Fibreboard Products Inc.'s Central Research Division, is now technical director of its San Joaquin Division pulp mill, East Antioch, Calif.

T. S. MARKOV, formerly at Fibreboard's mills in Northern California, is head chemist at Vernon (Los Angeles) Division.

N. O. (Nog) GALTELAND, long active in the instrument field of Northwest pulp and paper industry, is now cost engineer in building an air field in North Africa. He writes from Allied Constructors, Casa Postale 14, Casablanca, French Morocco. He turned down a position as resident engineer with a new paper mill in India. His son, George, is running his business, Instruments Supply and Service, Tacoma, Wash.

DORR ENGINEERS IN WEST



ROBERT HOCHSCHEID, (left) and THOMAS A. BINFORD (right) are representing Dorr Co. to the pulp and paper industry of Washington, Oregon and Idaho after setting up shop in new offices in 2705 Smith Tower, Seattle 4. Both have been with Dorr for three years. Bob Hochscheid had been visiting the mills out of Dorr's Denver office and specializes in industrial processes. Grad of Colorado School of Mines, 1948, his home for years was Portland, Ore. Tom Binford specializes in mill waste or water treatment, graduated from Univ. of Southern Calif., 1944, was in Los Angeles office till 6 months ago.

ESCO Golf Winners

With about 60 Esco staffers taking part, Cliff Paulson won their fall handicap golf tourney in Portland, Ore., with an 80 gross. His handicap was 4.5 Don Shirley's blind handicap of 15.75 gave him low net —70.25. Jack Wilcox won a putting contest.

JOHN M. WILCOX, Electric Steel Foundry co. process equipment division manager, 2141 N.W. 25th, Portland 10, Ore., has been appointed industrial affiliate representative for 1951-1952 for the Pacific Coast Division of the Superintendents. Announcement was made by R. Burke Morden, Morden Machines Co., Portland, secretary-treasurer of the division.

"Mac" McCurdy Joins D. E. Charles Agency



N. J. McCurdie (shown in picture), longtime resident of Wisconsin and in recent years Chicago district sales manager of the Panelyte Division of St. Regis Paper Co., has moved to Seattle to join the sales department of the D. E. Charles Agency, according to announcement by Mrs. Vernice Charles.

The expanding services and additional pulp and paper equipment lines which the Charles Agency is handling on the Pacific Coast and throughout Canada required enlarging its sales staff personnel which includes Steve Thurlow and Hap Felt. The agency represents Moore & White, Noble & Wood, Mt. Hope Machinery, Knox Woolen and several other manufacturers of pulp and paper mill equipment.

LLOYD WARE has been named assistant sulfite superintendent of Oregon Pulp & Paper Co., Salem, Ore., according to President *NILS G. TEREN*. Mr. Ware was formerly acting sulfite superintendent of Kennebec Division, Hudson Pulp & Paper Corp., Augusta, Me.

CORT MAJORS, general sales manager of Fibreboard Products Inc., San Francisco, was elected a vice president.

Meeting in B. C.

Harrison Hot Springs Hotel, 60 miles east of Vancouver, B.C., will again be the setting for the spring sessions of the Pacific Coast branch, Technical Section of the Canadian Pulp and Paper Association, May 1, 2 and 3. The year's chairman is A. R. Webb, superintendent of the Vancouver converting plant of Pacific Mills.

Sumner Mill Safety Mark

The Sumner, Wash., division of Fibreboard Products Inc., L. O. Fox, manager, ran a string of over 600 days—over 1,000,000 man-hours—without a disabling accident in the mill, finally broken in Nov. 1951.

Ticoulat Succeeded

The Pulp-Paper Committee of the International Materials Committee has elected the representative of France, Marc H. Hyafil, as its new chairman for six months. He succeeds A. S. Gilbert of the U.K. while F. J. Marcusson of Australia replaces G. J. Ticoulat, former U.S. representative, as the vice chairman.

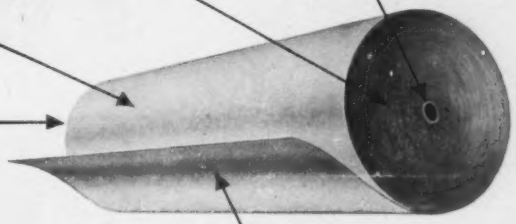
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Oliver High Density Thickener	Oliver Lime Mud Filter
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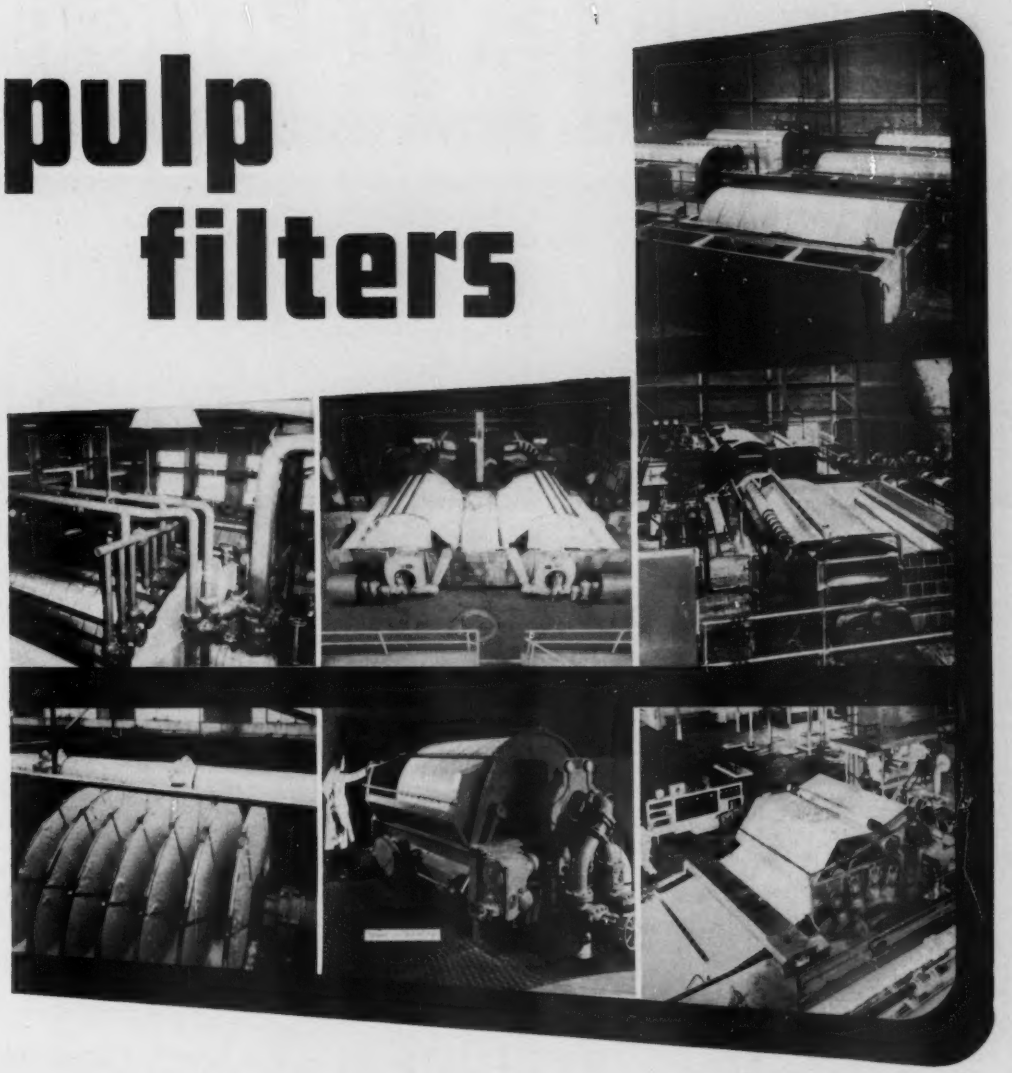
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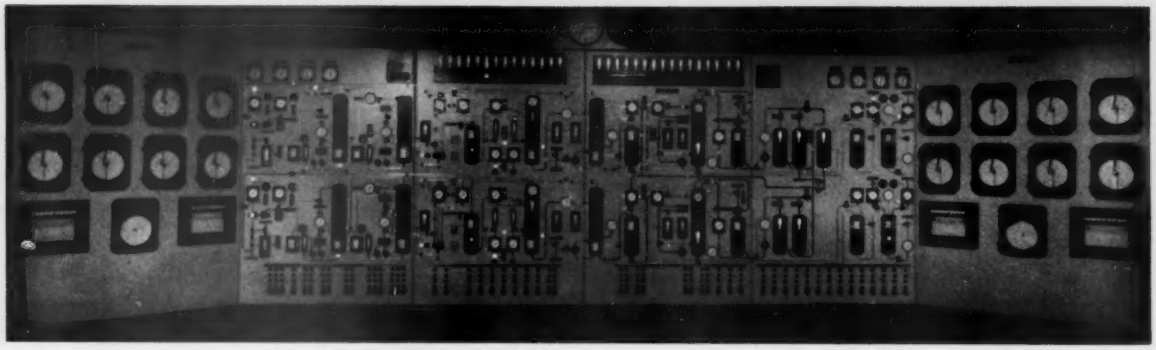
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New Styles in Panels

GRAPHIC DESIGN NOW USED IN MILLS



TWO-IN-ONE PANEL

PANELLIT, INC., of Chicago, designed and built this unusually large panel for two identical systems in one large chemical process. One system is shown above the other in the graphic design. All motor controls are at the bottom of the panel. PANELLIT is designing a huge central panel board about as extensive as this one, for a big Southern kraft mill.

(From a number of mills and instrument manufacturers, PULP & PAPER has obtained the following reports, and accompanying pictures, on one authentically new development in this industry—the use of central graphic instrument panels and of miniaturized panels for entire operations, such as washing, bleaching, etc. Photos of panels shown with this article came from the South, East Canada and Far West.)

Graphic panels—flow diagrams around conventional instruments—"are a coming thing—definitely." This statement was made to PULP & PAPER by the top manufacturing executive of one of the biggest and most progressive companies in this industry. And he also forecast:

"We won't just stop with an artist's background for remote controls, but the mills will have boards with flashing or neon lighting to follow through in a process. It will be flashy and colorful and have many advantages, including helping to instantly trace any trouble along the line." Already such boards are used in other industries.

There are at least four ways of showing a flow diagram on a schematic flow drawing on a graphic panel.

1. By painting it on.
2. Making it with anodized aluminum strips and pieces.
3. Making it with plastics.
4. Making it with inlaid linoleum.

"Miniaturization" is another new development in instrument panels. According to an explanation from one instrument manufacturer, this involves simply using small controls for instruments to save space, where a centralized panel is desired for a complete operation involving many instruments. This could be combined with a graphic panel. Advantages of graphic panels and miniaturizations include speed-up in the training of men and centralization of instruments and control.

One mill superintendent pointed out a possible disadvantage—that would bear watching, at any rate. "What if there was a radical change in process or equipment? This might entail a costly job in repainting or assembling a panel." But the change *itself*, no doubt, would be relatively much more costly.

The problem of time-lags in remote controls is another one to watch out for. Also it is now up to the instrument companies to develop adequate recording charts for a complicated panel—the kind that could be used effectively in a staff meeting the following day.

PULP & PAPER learned that one of the leading instrument companies is working on a small handy card, that would provide the essential information. This would replace the conventional cumbersome roll chart.

Sutherland Board In St. Joe Paper Co.

One of the most interesting of new graphic panel boards—and one of the most extensive in scope yet devised for the pulp and paper industry—is a large panel being designed by cooperative effort of Sutherland Refiner Corp. and Panellit, Inc., instrumentation engineers.

This is being designed for installation at the St. Joe Paper Co., St. Joe, Florida, and will control four separate Sutherland pressure type washers and will represent the process from the blow tanks through to the high density storage. It will be in colors and be one of the really new attractions in engineering in this industry.

SPECIALISTS IN GRAPHIC DESIGN

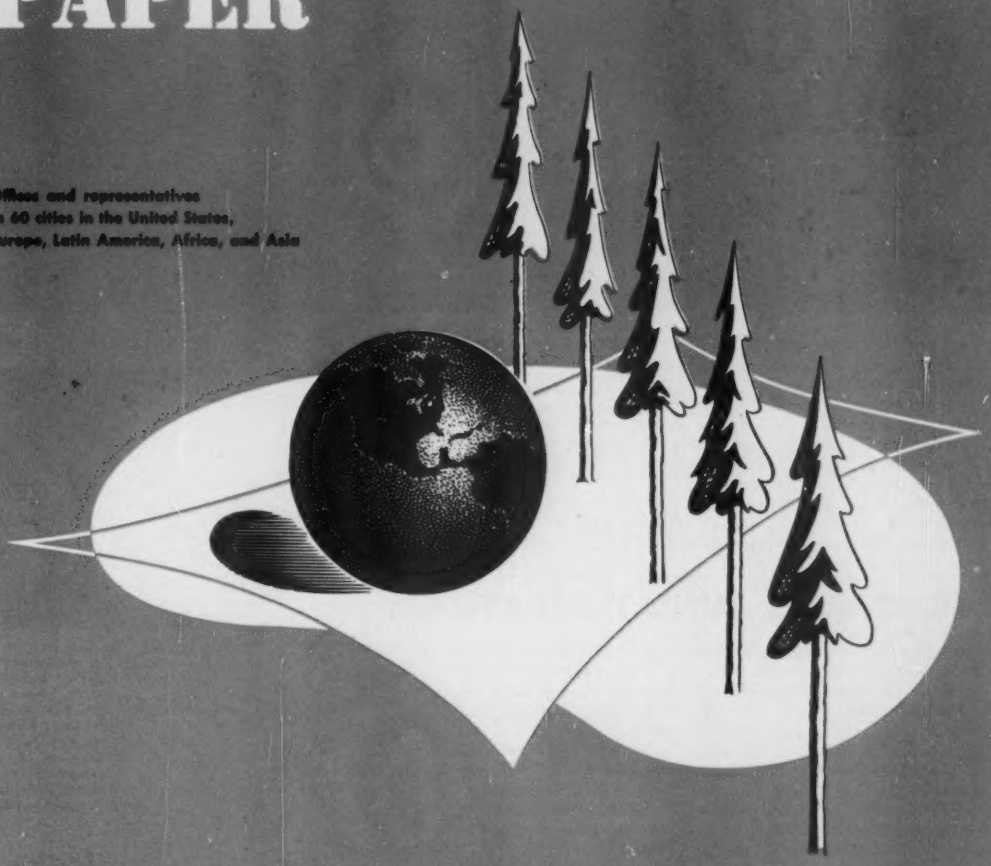
A very big ultra-modern panel board is being designed for a Southern pulp and paper mill multi-washing system by Panellit, Inc., of Chicago, a company which specializes in graphic panels and prefab instrument and control panels.

Neil Blair, formerly pulp and paper specialist with a big instrument company in the east, is now with Panellit. He told PULP & PAPER: "As processes grow larger and more complex, operating problems have multiplied. Requirements for higher plant throughput have also added to the operating complexity. At the same time, the availability of capable, experienced operators has decreased. "The trend toward centrallized control rooms with all the variables in the process indicated, recorded and controlled from one central location has helped make possible the supervision of an entire plant or process by one or a few operators," said Mr. Blair. "However, when standard instruments were used, the control boards became extremely long and the control rooms very large, making it impossible for one operator to supervise much of the plant or process. The graphic panel has given industry a powerful tool for placing the operation of such complex processes under a single operator. The graphic panel presents in a minimum of space a flow diagram of the process vessels. Vessels, valves and special equipment are represented by appropriately shaped symbols. Flow lines and piping may be indicated by removable aluminum lines, color coded to aid in identification.

"An essential component of the graphic panel is an alarm system, which uses lights and signals appropriately placed in the flow diagram to indicate immediately de-

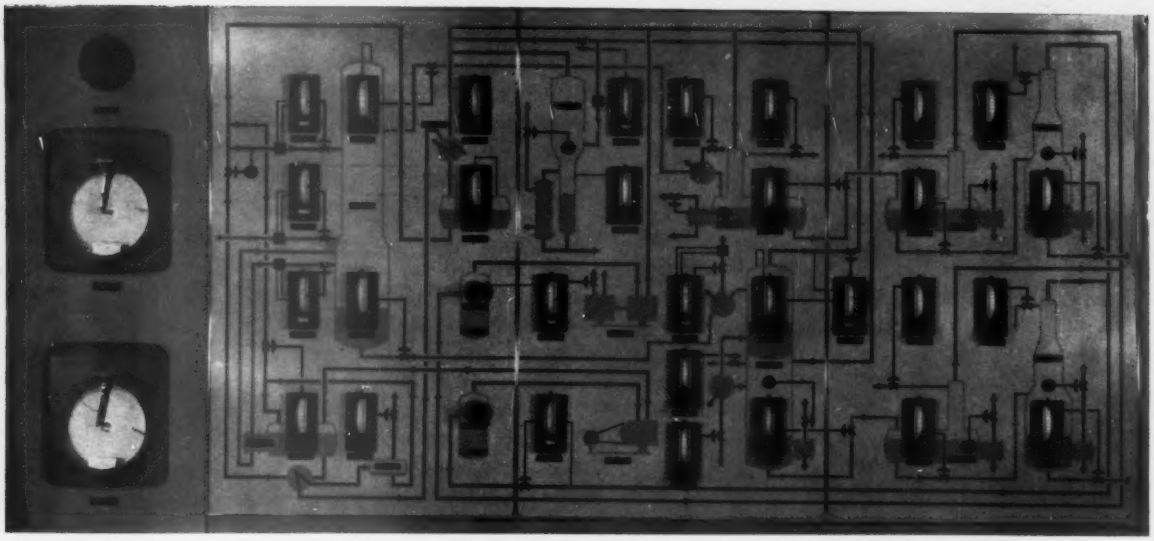
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viations from normal operation," he continued. "By calling the attention of the operator to these deviations before they become critical, supervisory control of operator can be extended."

Panellit design panels include one for DuPont at Niagara Falls with complete cycle control for reversing two regenerative catalyst units. There are 88 steps in the reversing cycle, and as controller changes each step and resets valves, illuminated arrows show operator which valves are open.

FOXBORO GRAPHIC PANEL

SHOWS GRAPHIC PANEL used for SO$_2$ Extraction Unit in a petroleum refinery in the Texas Panhandle. The panel material is made of Formica and the flow diagram is inlaid in 13 colors. An instrument engineer told PULP & PAPER Formica is "nicest" inlay material for panel because it can be hot-pressed, end up with smooth surface.

FOXBORO'S MINIATURIZATIONS

In commenting on graphic panel advantages, R. B. Wolf, Jr., assistant sales manager, Pulp & Paper Division, The Foxboro Co. Foxboro, Mass., told PULP & PAPER:

"The graphic presentation facilitates training of new operators, minimizes risk of mis-operation of equipment in an emergency or any critical time, and makes a neat showy understandable exhibit for any visitors, from students to company 'top brass.'"

For a large number of instruments, the Foxboro official said space can be saved in graphic panels by use of miniaturized instruments. Foxboro makes these miniatures in:

Indicating Consotrol (controller), Consotrol Recorder (recording only, but with remote setting and switching), M/58 Consotrol Controller (which can be attached to the Recorder to provide a recording-controlling system without requiring any separate mounting or interconnected piping), and M/50 Valve-Mounted Consotrol Controller (for flow, only).

"The Indicating Consotrol occupies only 3 x 6½ inches of panel space, and eight such instruments can be grouped in the same area that one control instrument of conventional size requires," said Mr. Wolf.

"Instruments of conventional and miniature sizes are sometimes used together, the larger ones being located around the sides of the graphic section of the panel," he said. "As many as six process points may be under the control of individual miniature Consotrol instruments, but the measurements from all six points are simultaneously received by one Multi-Record Recorder, a circular-chart instrument of conventional size."

DISCUSSION OF PANELS IN WEST

Russel D. Irwin, graduate of Drexel Institute, and an instrument specialist in the engineering department, Brown Instruments Division, Minneapolis-Honeywell Regulator Co., Philadelphia, made a trip to Olympia, Wash., to discuss graphic panels at the annual instrumentation meeting of Pacific Coast TAPPI on Jan. 15

Mr. Irwin described the panels as an artist's dress-up to remote controls, the instruments placed on a central board in proper places in a flow diagram or drawing of an entire process. He thought the first such panel was in Rock Island Refining Co.

It has important advantages, he stated, where the process is continuous, equipment is remote and instruments are nu-

FOR FOXBORO IN FAR WEST



EUGENE E. STEPHENS (center), a veteran of Bumstead-Woolford, which represents The Foxboro Company in Pacific Northwest, is surrounded by a couple of newer men in the Seattle office (1411-4th Ave. Bldg.).
CHET PATTEN (left) has been with the firm one year; KEN SCOFIELD (right) joined it Jan. 21 this year. "Stevie" Stephens is an Illinois U. grad.; Mr. Patten is from U. of Wash. and St. Regis Paper Co.; Mr. Scofield is from South Dakota School of Mines and Spaulding Fibre Co. of Milwaukee.

SPEAKERS AT OLYMPIA



DR. J. H. REDISKE (left), of Nucleonics Dept., General Electric Co., Hanford Atomic Energy Works, Richland, Wash., who said radioistope tracers are "admirably suited for studying reactions in chemical pulp manufacturing."
RUSSEL D. IRWIN (right), Engineering Dept., Minneapolis-Honeywell Regulator Co., Brown Instrument Div., Philadelphia, who said new graphic panels serve a real need in multistage bleaching or washing, might be justified in recovery plant, but have little to offer in digester house.

years of partnership with the industry we serve





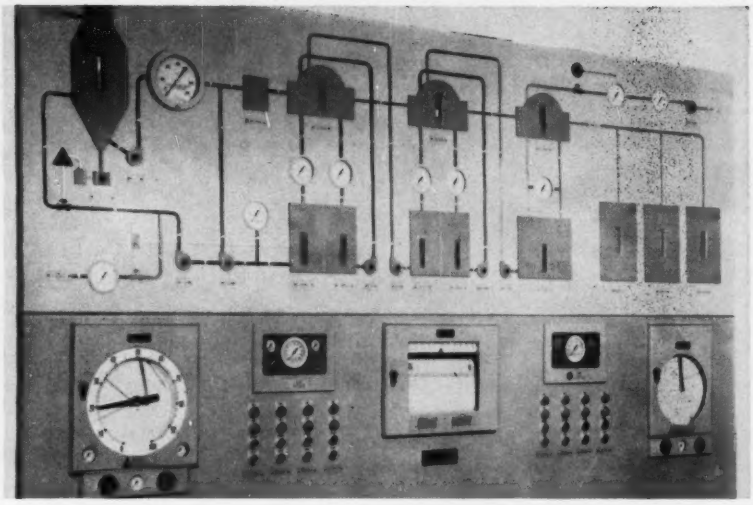
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STOCK WASHING SYSTEM



THIS BROWN STOCK WASHING PANEL was shown by Russel Irwin of Brown Instruments Div., Mpls.-Honeywell, to illustrate his talk at Olympia, Wash. Process from blow tank to storage show washers, filters and flow of wash water and liquor. Color shading may indicate materials in flow. This is partial graphic—recording and indicating controllers are below the diagram, but matching symbols indicate their points of application. Signal lights show pump and motor operation.

merous and inter-related. An operator can tell at a glance where any unit is operating unsatisfactorily. He said these panels would reduce training time for operators, and would be an advantage where a mill is expanding or increasing its staff.

Mr. Irwin declared: "It is estimated that the average cost of installation is about 40 per cent of the purchase cost. This is an average across the board figure and does not include housing. Experience indicates that a painted graphic panel will cost approximately 20 per cent more than a conventional one. If housing is no problem then the cost of graphic vs. conventional will be approximately 20 per cent or more. If, however, the available housing space is too small for the conventional panel or if new space must be provided, it is quite possible that the smaller space requirements of the graphic panel may compensate for the difference in first cost."

In deciding for or against a graphic panel, Mr. Irwin said these factors should be considered.

1. Is the process continuous?
2. Is it made up of interrelated pieces of equipment?
3. Is training new personnel a significant factor?
4. Is housing adequate for a conventional panel?
5. If housing is not adequate for a conventional panel could the space saving of a graphic panel equalize the overall cost?

WEYERHAEUSER GRAPHIC PANEL

One of the first of the new graphic panels for the pulp and paper industry of the Pacific Coast is the new board for brown stock washing at Weyerhaeuser Timber Co. operations in Longview, Wash. It was cited as an example in the discussion of graphic panels at the Olympia meeting and a photograph made by PULP & PAPER is shown accompanying this article.

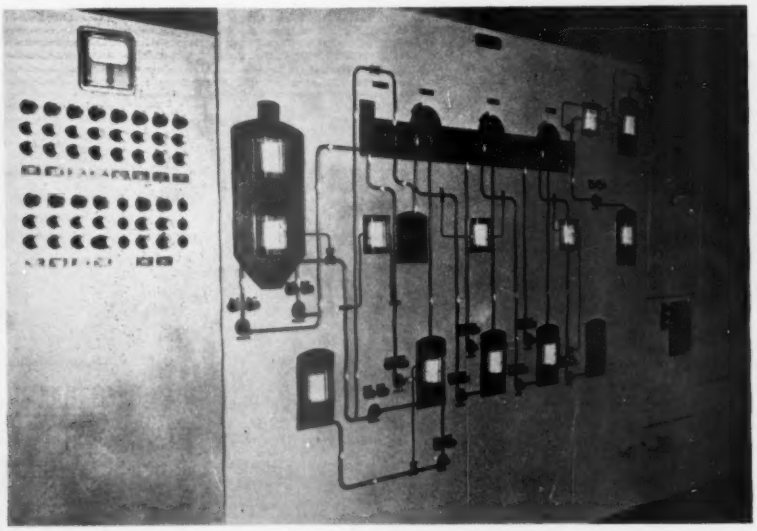
The wash room in a pulp mill is one of the places where the specialists say graphic panels are most advantageously adapted.

In explaining this board, made by Taylor Instrument Companies in collaboration with the Weyerhaeuser instrument department, Herb Peterson, instrument man for Weyerhaeuser at Longview, explained:

"By using the compact controller and recorder designed for the graphic panel, all the instruments for recording and controlling the brown stock washing process are contained in a process flow diagram placed on a panel 80 inches by 90 inches. Pumps, valves, orifice flanges, etc., are indicated by symbols made to simulate the equipment it represents.

"Pipe lines are shown with arrows indicating flow direction. Level recorders are shown in the tank outline. All instruments are located on the flow diagram in positions relative to their part in the operation.

"With the aid of this diagram it becomes a simple matter to follow either the stock or the liquor phase of the washing process (see photo)."



PANEL AT WEYERHAEUSER MILL

HERE IS ONE OF NEW TYPE OF GRAPHIC PANELS and one of first to be adopted in Western pulp and paper industry. This one records and controls a Brown Stock Washing Process in new Kraft Mill of Weyerhaeuser Timber Co. at Longview, Wash. The panel is by Taylor Instrument Companies and engineered by specialists working in conjunction with the Weyerhaeuser instrument department at Longview headed by Herb Peterson. This is an 80 by 90 in. panel with all instruments contained in a process flow diagram and pumps, valves, etc., indicated by symbols made to simulate that equipment.

PUGET SOUND'S GRAPHIC PANEL

A real work of art is a new graphic panel in the Alcohol Plant of the sulfite pulp mill of Puget Sound Pulp & Timber Co., Bellingham, Wash.

This one is used to control a General American Conkey single effect evaporator with a Rosenblad switching system. The panel was designed by Puget Sound's engineering department.

The finish on the panel is of special interest. It was desirable to have a finish that would not stain, that was easy to clean and that could be applied by the



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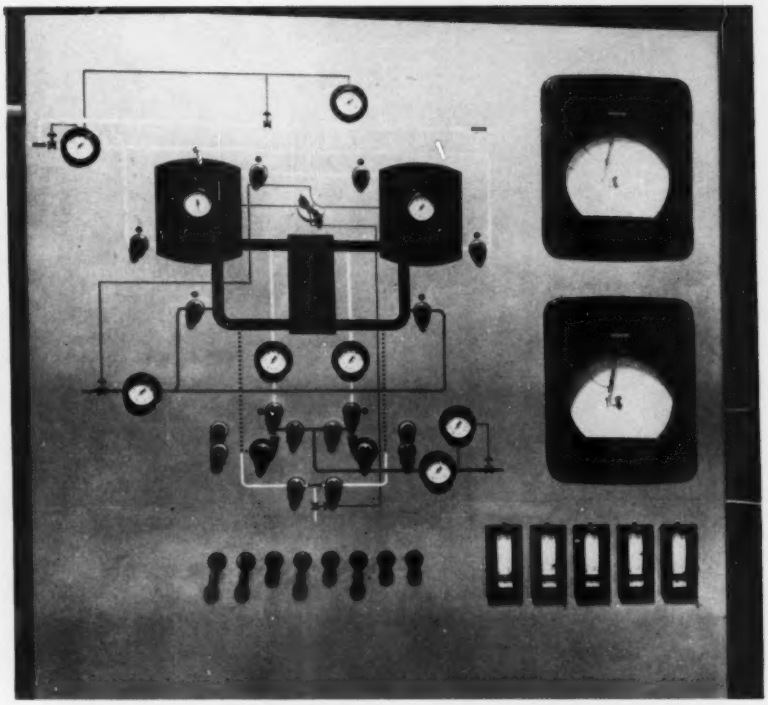
A GRAPHIC PANEL shown here is installed in Puget Sound Pulp & Timber Co., Bellingham, Wash., and has attracted a great deal of admiration in western industry circles. It was designed by the mill's own Engineering Department and is used to control a General American Rosenblad-patent switch type evaporator in the Alcohol Plant. Alcohol is a by-product of the sulfite pulp operation.

mill personnel. Wingfoot Vinyl floor covering made by Goodyear fitted the specifications.

The panel was first completely covered with a light green background material. The diagram was then laid out on the panel in pencil, the background cut out, and material of different colors inlaid. A darker shade of green was used for the major pieces of equipment; red, yellow, brown and black for the piping.

Name plates and valve numbers were cut from laminated plastic and inlaid so as to be flush with the surface. The advantages of this construction are that it provides a durable finish, is easy to clean, and minor changes can be made in the field without special tools or skills.

The panel is semi-graphic since the controllers and remote valve operators are located below the graphic diagram and only indicating gauges and valve position pilot lights are on the diagram. It was felt that such a system would be easier to operate since the valve operators and controls could be arranged in the order of operation and the diagram would still show a complete picture of the operating conditions and valve positions.



QUEBEC SCHOOL'S GRAPHIC PANEL

Nine helicoid pressure gauges and two Taylor dial thermometers are mounted on this paper machine valve panel at the recently enlarged Quebec School of Paper Making in Three Rivers. Instrumentation at the school is contributed to by Bristol Co., Minneapolis-Honeywell Regulator Co., Taylor Instrument Co. and Peacock Bros., Foxboro. Peacock Bros., Foxboro's Canadian representative, designed the entire panel for Stadler, Hurter & Co.

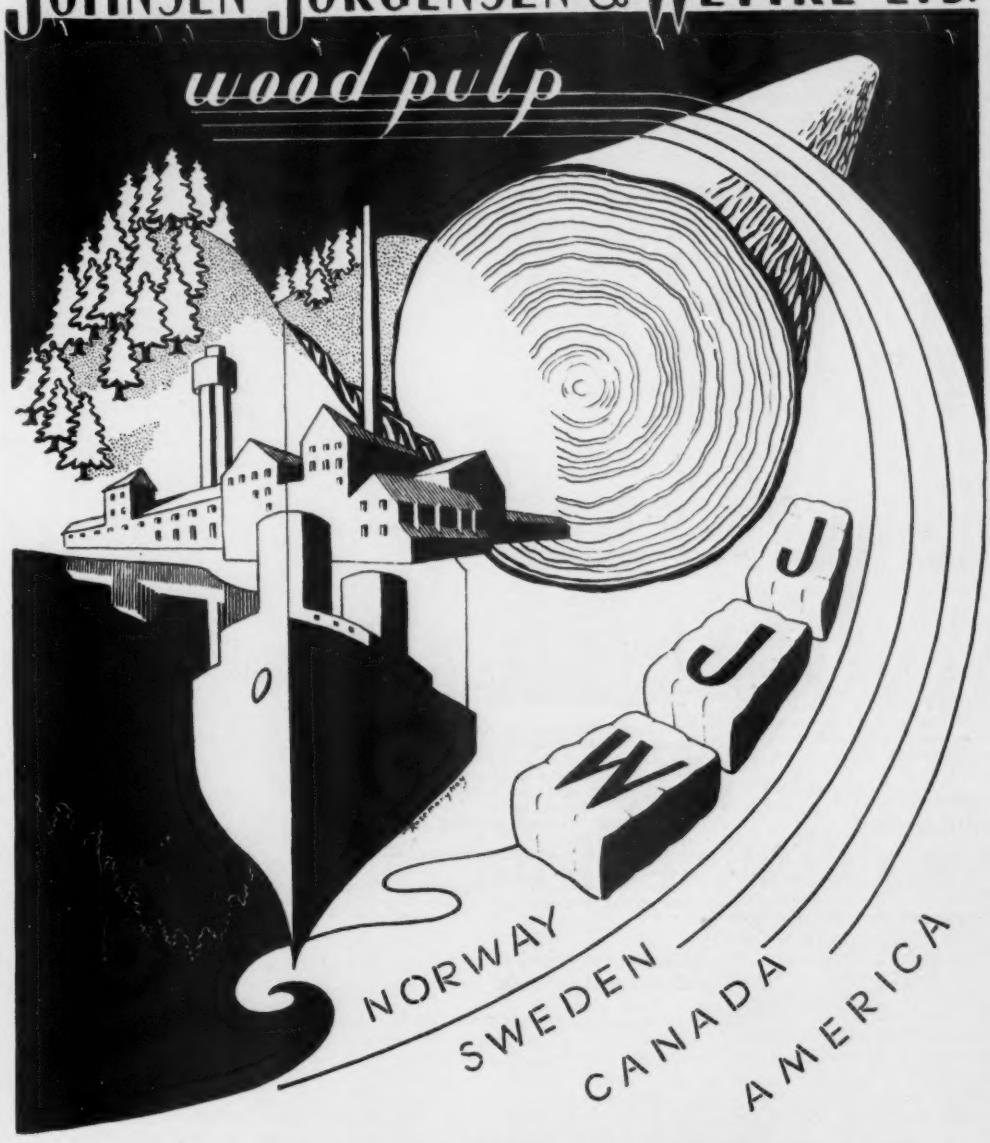
A flow diagram of the steam lines, con-

HERE IS A GRAPHIC PANEL for an experimental paper machine in Quebec School of Paper Making, Three Rivers, Que. Foxboro, Taylor and Brown instruments are used on a flow diagram of steam, condensate and fresh water lines. Valves are shown in correct positions. The entire panel was designed by Peacock Brothers, Ville LaSalle, Montreal, Canadian representatives of Foxboro, for Stadler, Hurter & Co.



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TELEGRAMS: "WETTRE, LONDON."

EDINBURGH **MANCHESTER**

densate lines and fresh water lines is pointed on the panel. The various control valves, hand valves and items of equipment are shown in their correct relative positions in the accompanying photograph.

The high and low pressure steam headers enter this panel, and all distribution of steam to the various sections of the dryers is controlled by the valves. The dryers may be operated on either low or high pressure steam by manipulation of the valves on the panels. When using high pressure steam, the steam may be desuperheated by means of the desuperheaters shown on the panel. The first dryer may also be operated under vacuum by opening and closing the necessary valves. Pressure gauges and dial thermometers indicate the quality of the steam.

ON INSTRUMENT PROGRAM



VIRGIL SUTHERLING (left), Chief Engineer, Longview Fibre Co., a former instrument man himself, was Moderator of the Instrumentation program given by Coast TAPPI at Olympia, Wash., and arranged the program. CHARLES H. CARTER (center), Puget Sound Pulp & Timber Co., discussed automatic firing of hogged fuel, and JAMES K. GOULD, Longview Fibre, told how instruments—less than 1% of plant investment at his mill—increased production and uniformity and cut costs.

Coast Speaker Urges Use of Radioisotopes

Virgil Sutherling, chief engineer, Longview Fibre Co. and a former instrument man himself, was chairman and moderator of the annual instrument meeting staged by Coast TAPPI, in Olympia, Wash., Jan. 15 and he arranged the program.

Dr. J. H. Rediske, nucleonics dept., General Electric Co., Hanford Atomic Energy Works, Richland, Wash., told the meeting failure of industries to make more use of radioisotopes, a by-product of the atomic plants, has been disappointing. He suggested perhaps the government should do more to make known to industry the possible uses.

The isotopes "are admirably suited to study and trace reactions in chemical pulp manufacturing," he said. He said they also could be used to "determine concentrations of waste in oyster beds or other areas."

He cited their use to trace location of stuck pipe cleaners in long pipes; their use for monitoring operations and the use of penitron to measure densities. He mentioned the uses already made in a few paper mills, previously reported in this magazine, as tracers on paper machines and to measure and control weight or density of paper on a machine.

"The man on the job in the mill will see applications for radioisotopes, when he is familiar with their limitations and possibilities," said Dr. Rediske.

James K. Gould, Longview Fibre Co. instrument man, reviewed the possibilities of instruments to increase production, speeds and uniformity and to cut time and costs in pulp and paper operations. He said in his mill less than 1% of plant investment is in instruments.

Charles H. Carter, Puget Sound Pulp & Timber Co., described an operation for automatic firing of hogged fuel.

The other speaker, Russel D. Irwin, pulp and paper specialist for Brown Instruments Div., Minneapolis-Honeywell Regulator Co., Philadelphia, gave what is believed to be the first paper presented in this industry on new graphic panel instrumentation. In this issue, PULP & PAPER has gathered together a symposium of what several mills and instrument companies have done in developing this interesting innovation in this industry and his remarks are included.

RAYONIER WAS HOST



RAYONIER, INC., was the host company for the annual Pacific Coast Instrumentation meeting held by Coast TAPPI at Olympia, Wash. Several of their staff worked on arrangements. L. to r.— ORVAL ANDERSON, Lab Engineer, Central Research Div., Shelton, Wash. BEN BRIGGS, Research Chemist, Central Research, Shelton. ELLIOTT WOODRUFF, Chief Chemist, Port Angeles, Wash., Mill. JOHN W. BENNETT, Development Engineer, Central Research, Shelton.

Newsprint Projects Due for Approval

As this issue went to press, Washington, D. C., spokesmen of government agencies told PULP & PAPER the "log-jam" might very well be broken on certificates of necessity for several new newsprint mills or additions to present mills.

One would be for the new Bowater's newsprint mill projected for Charleston, in eastern Tennessee. It is understood Bowater's company of London, England, which has long planned this mill, would not go ahead without the certificate which allows for tax writeoff.

Gov. Gordon Browning of Tennessee and the Tennessee Valley Authority, which has large timber acreage on which the mill could draw, have endorsed the Bowater project for a 130,000 tons-a-year mill. Southland Paper Mill's application to expand Lufkin, Tex., and Great Northern Paper's in Maine would be okayed along with Bowater's.

IN INDUSTRY NEWS



CURTIS R. GEORG (left), newly elected Vice Pres. and Director of Graham Paper Co., in St. Louis, Mo., nationally prominent paper firm. He had been Eastern Sales Mgr., and had experience in paper manufacturing. He moves to St. Louis in April. AVERY J. FEILER (right), who has been elected Vice President and Secretary of Perkins-Goodwin Co., New York, international pulp and paper sales firm with offices in Chicago, Lufkin, Tex., and Stockholm.

Great Northern Studies Sulfate Plant Possibilities

In spite of recurrents reports to the contrary, Great Northern Paper Co. officials do not confirm plans to build a new mill to make sulfate pulp from its large hardwood holdings in Maine. The persistent rumor has been that plans for the mill will be revealed at the annual meeting of stockholders in March.

Officials of Great Northern point out that they are always exploring the possibilities of exploiting their holdings, which would give rise to the rumors, but there are no definite plans in mind for the reported 400-ton sulfate mill at this time. The rumors have followed closely on appointment of Manuel C. McDonald, formerly prominent in the Southern Kraft industry and recent president of Chesapeake Corp. of Virginia, to head Great Northern.

First Oklahoma Mill

Oklahoma state's first paper mill has started up. It is the fourth mill for National Gypsum at Pryor, Okla., making the company self-sufficient in paper needs. Is making 150 tons daily of special laminated paper for gypsum board, lath and sheathing.

Other Conference Dates

The other state Labor-Management Safety Conferences were to follow to a considerable degree the same program pattern as the Washington state meeting held in Tacoma, with the same co-chairmen, Al Brown and Sid Grimes, and probably most of the same leading speakers. The California meeting (9 mills) was set for Los Angeles, Feb. 21-22 and the Oregon meeting (7 mills) for Portland, Mar. 14-15.

NYU Offers Pulp-Paper Course

A course called "Survey of Pulp and Paper" and described as a new, broad approach for the laymen on the papermaking process is being offered this year by New York University. Moderator of the course is Leonard Schlosser, vice-president, Schlosser Paper Corp.



Typical wool showroom, where buyers make their selections.



Photographs courtesy of Wool Bureau, Inc.

Out Where Huyck Felts Begin

First, the fleece. From 1,500 classified types, buyers choose only those special wools that meet the exacting requirements of Huyck Felts. In the principal wool-growing countries of the world this discriminating selection goes on. For these must be just certain wools, rare and costly.

In they come, to the great wool warehouses at Rensselaer, New York. From this vast supply, skilled sorters select the grades specified for each type of felt, then blend them for the precise task the felt is to perform on the paper machine.

This is the first, and only the first step in making the famous Huyck felts which for 82 years have rendered such essential service to the pulp and paper industry.

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Personals

MIDDLE WEST NOTES

F. J. SENSENBRENNER, 87-year old ex-president and chairman of Kimberly-Clark, was confined to bed in his North Shore home at Appleton recently, but it didn't stop him from working. Acting in his capacity as president of the U. of Wisconsin regents, he phoned industrial firms, dictated letters to helpers, until over 100 firms were reached and $115,000 raised in gifts for the university.

CHARLES S. BOYD, died in Miami, Fla., recently after 47 years as president of Appleton (Wis.) Coated Paper Co. and its predecessor company, Chas. S. Boyd Paper Co., in Kaukauna, Wis., which he founded. His company became largest maker of colored coated papers in the country. He was born in Appleton, graduated from Lawrence College in 1871 and was with various paper companies and was sales manager for Whiting-Plover Paper Co. before going into business himself. He was a charter member of Appleton's Park Board and did much to develop the city's parks.

AUGUST J. KRULL, former superintendent of mills in West De Pere, Wis., Neenah, Wis., and Joliet, Ill., died recently at Neenah at the age of 82.

WILLIAM R. KILLETT, vice president in charge of manufacturing, Kimberly-Clark, has accepted chairmanship of the 1952 Red Cross fund drive in Menasha, Wis.

OWEN (BUNNY) LYONS, advertising manager of Marathon Corp., is publicity director of the Menasha drive by appointment of Mr. Kellett.

AGART WIBERG, mill superintendent, Gilbert Paper Co., Menasha Wis., has two sons in the western mills. *ROY R. WIBERG* is project chemist in the technical department of Weyerhaeuser's Pulp Division at Longview, Wash., and his brother, *EDGAR WIBERG* is a tour boss at Weyerhaeuser's pulp and paperboard mill at Springfield, Ore.

ROY GIDDINGS, an executive in the paper industry for 40 years and formerly with Thilmany Pulp & Paper and Tuttle Press, Appleton, Wis., died Jan. 6 at Santa Barbara, Calif., where he lived in retirement. He was sales manager of the Thilmany mill at Niagara, N.Y., before it was sold to Kimberly-Clark.

JOHN KRENN, Sr., and five sons all work in the Niagara, Wis., mill of Kimberly-Clark Corp. John Sr. worked many years in the wood room, now is in service operations. A sixth son, Louis, worked at Niagara, also, until his death recently. He was backtender on the new machine. Other sons are John, Jr., and George, both in the wood room, Phillip and Harold, in service operations, and Carl, engineering mason.

DAN B. CHAPMAN, of Appleton, Wis., is serving the Midwest industry in his new capacity as sales representative in that area for Morden Machines Co.

IN MICHIGAN NEWS





JAMES A. MAROHN (left), elected Vice Pres. in charge of Finances, Kalamazoo Vegetable Parchment Co. 1935 grad of Notre Dame, he recently has been Vice Pres., Treasurer and Director of Noma Electric Corp., New York, and of its many subsidiaries. Earlier he was with Ernst & Ernst, Pittsburgh, where he married the fomer Gloria Kaye Schaefer. They have two sons.

TOM M. BARRY (right), Manager of Northern mills, Hollingsworth & Whitney Co., who is coming to Kalamazoo from Maine to discuss making high speed paper specialties at the Superintendents dinner Mar. 20. He formerly was Mgr. of the Fraser mills at Madawaska, Me.

IN LAKE STATES NEWS





THOMAS LEECH (left) Vice Pres. & Sales Mgr. of Whiting-Plover Paper Co., Stevens Pt., Wis., who has succeeded A. J. Schierl, who resigned, as General Mgr. Mr. Leech will carry on previous duties, also. F. B. Whiting was re-elected Chairman; Geo. A. Whiting became Treas. as well as Pres.

PHILLIP E. ANDERSON (right), who is new representative in Wisconsin, Minnesota and Upper Michigan for F. C. Huyck & Sons, Rensselaer, N. Y. He succeeded Byron Yale, who has retired.

HENRY G. BOON, vice president of Kimberly-Clark Corp., Neenah, Wis., has been re-elected chairman of the Outagamie County chapter of the American Red Cross which takes in Appleton, Kaukauna and territory to the north. Their fiscal year budget is $18,500.

R. G. MACDONALD, TAPPI secretary, was awarded an honary doctor of science degree at Western Michigan College, Kalamazoo, by President *PAUL V. SANGREN*.

JOHN R. KIMBERLY was elected chairman, *D. K. BROWN*, president, *LEO O. SCHUBART*, executive vice president and secretary, and *DONALD H. SEVERSON*, treasurer at the Neenah Paper Co. board meeting. *DR. ALAN ADRIAN*, director of research, and *FRED LEECH*, assistant sales manager, were elected to the board. *D. CLARK EVEREST* has been re-elected president of Marathon Corp., as well as chairman, maintaining his headquarters in Rothschild, Wis. V. P.'s re-elected were John Stevens, Jr., Allen Abrams, Leo Croy, Roy Sund and Donald Snyder.

FRED PEERENBOOM is chairman of a 30-man safety program steering committee for the Neenah, Wis., mill of Kimberly-Clark Corp. and the program of his committee was praised at a recent meeting by *F. W. WERLING*, Neenah mill manager.

PACIFIC COAST NEWS

BRUCE F. BROWN, Sr., who for many years was manager of the Vernon (Los Angeles) division of Fibreboard Products Inc., died Jan. 14. He played a prominent part in Fibreboard's growth in Southern California. His son, Bruce Jr., former chemist at mill during his father's tenure, is now assistant manager at Vernon.

ARTHUR DAMMAN, formerly of Bumstead & Woolford, representing Foxboro Co., out of Seattle, Wash., has joined Puget Sound Pulp & Timber Co. in Bellingham, Wash., and will eventually be stationed in Ketchikan, Alaska, as instrument engineer for the sulfite MgO pulp mill of the new Ketchikan Pulp & Paper Co., a company formed by Puget Pulp and American Viscose. Mr. Damman, who went west from North Carolina, doing graduate work at the University of Washington, has been in the pulp and paper instrument field for many years, having also been with Bristol Co. and Instrument Co. of Seattle.

ERV THIEME, technical director, Soundview Pulp Division, Scott Paper Co., says he has several good technical papers by for the Coast TAPPI's annual Shibley award contest at Camas, Wash., March 21.

ERIC ERICSSON, technical director, Puget Sound Pulp & Timber Co., Bellingham, is almost as busy completing his new home in Bellingham as he is in assisting Vice Pres. Erik Ekholm, who has charge of overall planning and organization for the new pulp mill in Alaska.

JACK SUTHERLAND, representative for Hooker Electrochemical Co. in the Northwest pulp and paper industry, finally was able to move from Seattle to his headquarters in Tacoma, when he found a view home at Brown's Point, Puget Sound. Actually, he didn't get all the way to Tacoma, as this is on the Seattle side of town.

WILLIAM E. BREITENBACH, vice president in charge of manufacturing, Rayonier Inc., New York, has moved his family into a new home at Riverside, Conn. He moved to the east from Port Angeles, where he was resident manager.

ED RAGGHIANTI, from the San Francisco office of Crown Zellerbach Corp., has been transferred to Seattle to head the National Sales and Paper Specialties divisions there, succeeding Sherman Gue who went into the paper jobbing business for himself in Seaside, Ore.

NEIL ROBERTSON, mill manager, West Tacoma (Wash.) Newsprint Co., underwent a hernia operation in January and is well on his way to recovery and was spending part days at the mill last month.

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NEW PAPER USED FOR FISH



A NEW PAPER USE MAKES GOOD. This photo shows a kraft wet strength paper liner for tuna baskets, which makes savings in fish, time and money. It is displayed by Supt. Jack L'Amie of the Astoria, Ore., cannery of Columbia River Packers Association, as he stands beside rack of tuna baskets which are lined with paper before loading with tuna for pre-cooking.

Perforated paper liners for the wire baskets in which tuna are pre-cooked before canning are rated by some successful tuna operators as among the truly important post-war developments in fish packing techniques.

They save fish, time and money.

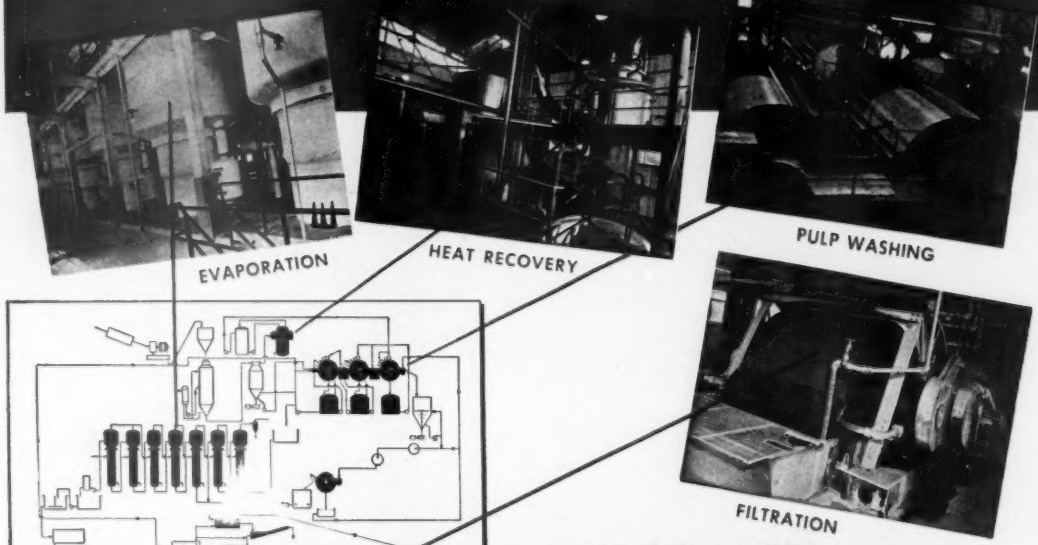
The paper for tuna basket liners observed in use both in Southern California and on the Columbia River was manufactured by the Longview Fibre Co., Longview, Wash., kraft mill and converted into liners by Dowman Products, Inc., Long Beach, Calif., and distributed by Blake, Moffit & Towne.

M. T. Hines, B-M-T salesman, is credited with originating the idea.

The liners are heavy kraft paper treated chemically in manufacture to give wet strength. Fish are also subjected to high temperature in a steam atmosphere.

Basket liners are perforated to facilitate draining of oil and juices expelled from the fish during pre-cooking.

Here Swenson Can Help You...



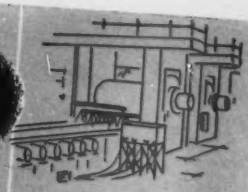
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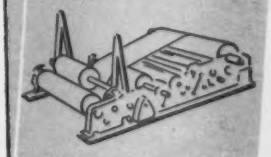

RUBBER INDUSTRY


PLASTICS INDUSTRY

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V★S Drive provides an unlimited range of speeds from A-c. circuits. In addition, V★S offers controlled acceleration and deceleration; slow speed for jogging, inching or creeping; fast, smooth reversal at any point desired and other specialized functions to suit particular applications. Safe, simplified control saves man hours—reduces operator fatigue. Centralized operator's station for the control of one or more drive motors can be located at any convenient point. Write today for *new* V★S Drive Bulletin D-2311.


PAPER INDUSTRY

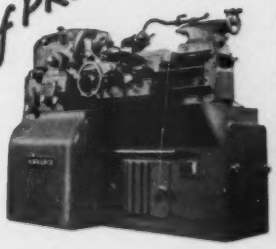

WIRE AND CABLE INDUSTRY


FOOD INDUSTRY

MINING INDUSTRY

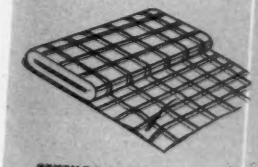


PROOF of PROGRESS!



Just after the turn of the century, the lathe above made news with its adjustable-speed Reliance Armature-shifting Motor. Modern lathes (right) have built-in Reliance V★S Drives to provide control of all functions of spindle and speeds.


CHEMICAL INDUSTRY


TEXTILE INDUSTRY


METAL FABRICATING INDUSTRY

RELIANCE ELECTRIC AND ENGINEERING CO.

Personals

SOUTHERN NOTES

EDWIN J. SPIEGEL, who became the new president of Gaylord Container Corp., of St. Louis, with its big paper mills at Bogalusa, La., in mid-January, is a native of Fort Wayne, Ind. He moved to St. Louis in 1918 as accountant with Ernst & Ernst firm and joined Gaylord in 1920. Now 57, he had been treasurer of the paper company since 1920 and succeeded the late *CLIFFORD W. GAYLORD* as president.

DR. J. E. COPENHAVER, head of the technical department of Sonoco Products Co., Hartsville, S.C., has been named president of the Pee Dee area council, Boy Scouts of America.

JIM CRAIG, who has been conducting a consulting forest service at Jackson, Miss., for the past number of years, has been named Mississippi State Forester. He succeeds *ALBERT A. LEGGET*, who succumbed to a heart attack in December.

DON P. JOHNSTON, of Wake Forest, N. C., has been elected president of The American Forestry Association.

SAMUEL KIPNIS, president of National Container Corp., announces appointment of *A. LEE GORDON, JR.* as manager of its Memphis-Mid-South territory. Mr. Gordon, who has many years experience in the shipping container industry in the South, will open a regional office in Memphis.

RONALD W. CHILDERS, general superintendent of Macon Kraft Co. succumbed to a sudden heart attack Jan. 17. Funeral services were conducted at Port St. Joe, Fla., where Mr. Childers resided before the building of the Macon mill, on Jan. 19. The Macon mill, under the direction of Mr. Childers, had evidenced the development of a close-knit efficient organization.

JAMES GLADDINGS is chief piping engineer at Mobile, Ala., headquarters of Southern Kraft Division, International Paper Co.

B. H. BUCK has been named chief engineer for both the mill at Jacksonville and the new mill project at Clyattville, near Valdosta, Ga. He has been serving as chief engineer of the Jacksonville mill.

Appointments Made For N.C.C. Expansion

KARL GUEST has been named assistant general manager of National Container Corp., at Jacksonville, Fla., according to announcement by *WILLIAM T. WEBSTER*, vice president and general manager.

J. E. MAILHOS, previously listed as power plant superintendent, has been placed in charge of power, electrical, instrument and construction work including the drafting room at Jacksonville. He will report directly to *OTHA WINNINGHAM*, the general superintendent. In construction work, however, he will report to Mr. Guest.

J. W. LESSEL has been named power plant superintendent, succeeding Mr. Mailhos. His position of instrument supervisor has been filled by appointment of *HARRY WALKER*.

JOHN KEEGAN, who has been safety director, has become assistant personnel manager and safety director.

DEER HUNTS for employes on the forest lands of Gulf States Paper Corp., Tuscaloosa, Ala., have proven most popular. The company, like many another paper manufacturing concern in the South, owns hundreds of thousands of acres of forest land under careful management. As the years advance, and the stand becomes more dense the population of larger game increases.

JAMES A. HOLEKAMP is a new logging engineer added to the staff of the American Pulpwood Assn. Mr. Holekamp comes to his new work from the Coosa River Newsprint Co., and before that served as a forester for the William Bonifas Lumber Co. in northern Michigan. By mid-summer, he will be making his permanent headquarters in the Association's New York offices.

NORTHEAST NOTES

ARTHUR W. POHLMAN, founder and president of A. W. Pohlman Paper Co., New York, long prominent in distribution of fine, book and cover grades by leading mills, died of a heart attack at his Maplewood, N. J., home Jan. 1. He was 69.

DONALD R. AYERS, purchasing agent for materials and supplies except waste paper and pulp for the past 20 years, for Continental Paper Co., Ridgefield Park, N. Y., will take over those purchases, also as a result of resignation of *ADOLPH E. MAVES* as vice president in charge of purchasing. Miss *LORRAINE R. ANSALONE* continues as assistant buyer for waste paper and *MELVIN A. DUBOIS* as assistant p.a. for other supplies. The purchasing dept. reports to *ARNOLD B. HUYSSOON*, senior vice president.

PAUL W. JOHNSON, former development engineer, has been promoted to assistant supt. felt mill, Bird & Son, Inc., East Walpole, Mass., succeeding *REXFORD H. SALISBURY*, retired. At the East Providence plant, *HELGE HOLTER*, night foreman, has been promoted to foreman of beaters, left machines and cleaning room. *RALPH M. WIGHT* has been appointed personnel director at East Walpole.

JOHN J. INCH has been appointed traffic assistant to the vice president for distribution of Scott Paper, Chester, Pa., and *O. H. MILLER* succeeded Mr. Inch as director of traffic.

WILLIAM J. MURRAY, JR., native of South Carolina, and chairman of the board of McKesson & Robbins, has been elected a director of International Paper, New York.

COURTNEY H. REEVES, president of Carter, Rice & Co., Boston, paper firm, is credited with being a big factor in the success of the recent Annual Printing and Publishing Week exhibits and sessions in Boston for six New England states.

CARL T. COLLINGHAM has been named as special East coast representative for the paper and paper products handled by Getz Bros. & Co., Inc., San Francisco exporters and importers. Mr. Collingham was formerly with Bulkley Dunton & Co. *AVERY FEILER* has been named a vice president of Perkins-Goodwin Co., according to *LOUIS CALDER*, president.

LOUIS S. KIMBALL will head the recently re-established Angier Sales Corp., Framingham, Mass., according to *ALBERT J. THIEL*, president of Angier Corp., parent company. The new company will sell industrial packaging and building papers manufactured by Angier.

Central National Corp., well-known exporters of paper associated with Gottesman & Co., has announced the appointment of *JOHN W. CROSSON* to the sales and purchasing departments. Mr. Crosson has been with St. Regis Sales.

THOMAS B. MCCABE, president of Scott Paper Co., is now a director of General Electric Co. Chairman of the board of governors of the Federal Reserve System from 1948 until April, 1951, Mr. McCabe has only recently returned to full business activity.

National Gypsum Co., Buffalo, N.Y., has appointed *FRANK D. DAVIS* as public relations manager to fill position vacated by *DAVID A. WHITE* who is now on active duty with the U.S. Air Force, according to *DEAN D. CRANDELL*, vice president in charge of sales for the company. *G. WILLING PEPPER*, vice president, Scott Paper Co., has been elected director of United States Plywood Corp.

LOUIS CALDER, JR., vice president and assistant to the president and a director of Perkins-Goodwin Co., has assumed the duties of sales manager of the paper department formerly handled by *DAVID I. EDWARDS*, whose retirement because of ill health became effective Jan. 1. Mr. Calder joined Perkins-Goodwin in 1949, became assistant to the president and a director in 1951, and was elected a vice-president last November. He is a Princeton grad, had Navy duty in the Pacific Theatre.

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We have designed and built the largest paper machine in operation in the Western Hemisphere. In contrast, we have also, designed and built complete to the last detail, one of the smallest paper machines in the World.

To design and build machines in such wide-spread sizes, of necessity, requires the exceptional experience and research-advanced technical knowledge of paper making, characteristic of the Bagley & Sewall Company background.

No matter what the requirements may be for your new paper machine, you can be sure of adequate and flexible manufacturing facilities . . . of course, the technical know-how and fine quality of Bagley & Sewall productions.

Our Engineering Staff will welcome an opportunity to assist with new mill requirements or present mill problems whether these are large or small.

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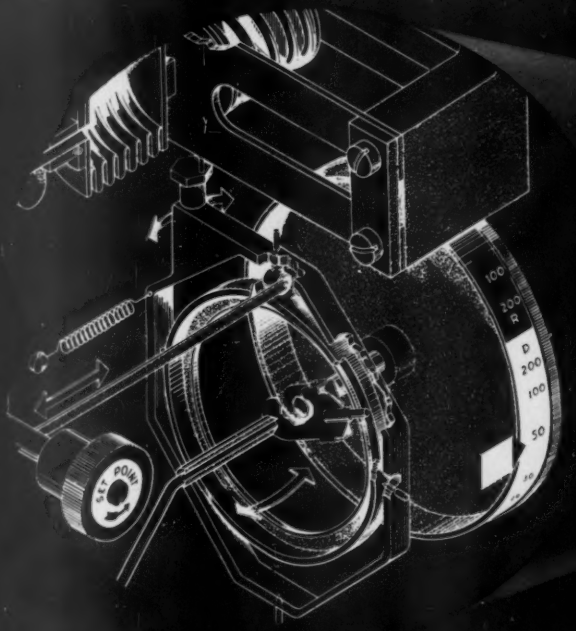
Finland Representative

Aktiebolaget Ekstroms Maskinaffar

Helsingfors, Finland

HERE IS A *Completely*

THE GIMBAL UNIT

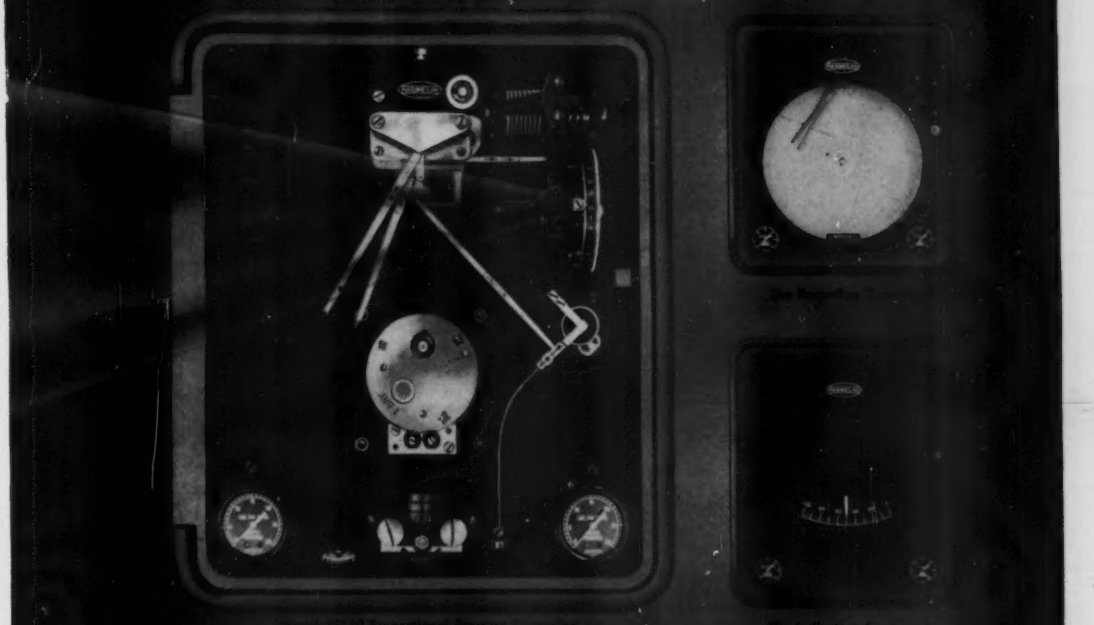


ONE control mechanism gives you **FOUR** combinations of primary and feedback motion to obtain Direct Proportional, Reverse Proportional, Direct Differential-gap and Reverse-Differential-gap Control.

With **ONE SETTING** you select type of control, type of action and proportional band or differential-gap setting.

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MODELS NOW AVAILABLE

Recording and indicating types are now available for pressure, temperature, liquid level or flow service with the following types of control:

Proportional (includes Differential-gap and On-Off)

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Plus these supplementary types—

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Canada's Kraft Meeting

A Special Report from Montreal
Digester Corrosion—Soda Losses

BY "YOUNG TECHNICAL MAN OF YEAR"



G. G. Sutaone (in picture), winner of the Canadian industry's first prize for outstanding work by a young man in the industry, has written this special report for PULP & PAPER readers. He won his prize—the coveted 1952 C. Howard Smith Medal Award Competition for 1952—at the same big annual meeting in Montreal of the Canadian industry, where he was reporting for PULP & PAPER.

He covered the kraft industry sessions—his specialty.

Young Mr. Sutaone is a chemical engineer with Canada Paper Co., Windsor Mills, Que., where he developed his prize-winning paper, "Analysis of Sulfate Black Liquor." He intends to return to his native country, India, in May to take up duties with Battarpur Paper and Straw Board Mills Ltd.

PULP & PAPER is proud to present to kraft men this news of what's doing in Canada's kraft industry by Canada's No. 1 Technical Young Man of 1952.

By G. G. Sutaone

Winner of Howard Smith Medal—Canada's "Young Technical Man of Year"

A progress report on kraft digester corrosion studies in Canada, and other discussions on how Canadian kraft mills use hardwoods, how KVP controls soda losses and how the Windsor Mills processes knots, were some of highlights for benefit of kraft men at the Canadian annual meeting.

Claude Steeves, superintendent at Marathon Paper Mills, presided at the alkaline pulping session as chairman-elect of that committee, in the absence of Gordon Allo of Bathurst, the chairman. With Mr. Steeves two other superintendents—T. W. Houghton of Windsor Mills (Canada Paper Co.) and E. G. Wilson, KVP Ltd., and Dr. J. H. Ross of the Pulp & Paper Research Institute of Canada, were discussion leaders.

Control of Soda Losses

Mr. Wilson described the well-laid out system of sewers at his mill in Espanola, Ont. KVP's kraft mill has 6 main drains, with a weir, flow recorder and a sampler on each of them. The six drains discharge into one common sewer. At the end of each shift aliquots are taken from each sampler and sent to the laboratory, and the sample container is drained out. There are thus 18 sewer samples per day to be tested. Washed pulp from each line of washers is sampled hourly and composited on a shift basis. There are thus six pulp samples per day to be tested. A daily composite of the pulp is also prepared for a calcium analysis. A sample from No. 6 drain covering liquor-making operations is also analysed for calcium on a shift basis. This enables the mill to determine if any excessive lime mud is being sewered.

Analysis of such a large number of samples per day was made possible with use of the Beckman Flame Spectrophotometer. A daily report on salt cake and lime loss is issued by the technical department. This enables the operating departments to correct any faulty conditions before the losses attain significant proportions.

Following this procedure the salt cake loss was reduced from 350 lbs/ton to 100 lbs/ton of pulp by improving operations where excessive losses were located. The accountable loss agrees very well with the makeup salt-cake calculated from inventory and averaged every month.

In answer to a question Mr. Wilson stated that the salt-cake loss for 1951 averaged about 140 lbs/ton of pulp because of over-loading of the equipment for increased production.

Digester Corrosion

Dr. Ross reported on the Pulp and Paper Research Institute project, at request of several mills which have made financial contributions, to investigate corrosion. Claude Christiansen is head of the task force on the project that will visit all alkaline pulp mills in Canada and probably some in the United States. The Institute has also secured services of Dr. W. A. Mueller, physical chemist from Germany, with about 15 years' experience in corrosion problems. An experienced and competent metallurgist is being looked for and will soon be appointed.

Dr. L. R. Thiesmeyer, president of the Institute gave a brief report on the progress made so far. He informed the group of the new instrument for corrosion studies developed by the Institute in conjunction with Isotope Products Limited and called the "Gammagauge." This instrument makes it possible to make rapid measurements of digester wall thickness with an accuracy of ¼th of 1 percent. (0.25 percent) The instrument can be coupled to a recorder. 15 minutes time is enough to go around the whole circumference of the digester and 8 hours for the whole digester. It is expected that this is going to be a very useful tool for the investigation of corrosion problems.

Mr. Christiansen reported on the findings of the group at Fraser Companies Ltd., Newcastle, N.B., modern kraft pulp mill which started up just two years ago. The object was to try and study methods of measurement with different instruments. Complete visual inspection was made on 4 digesters, together with extensive audigauge and gammagauge readings, photographs and plaster samples. All digesters were installed and started in late 1949. Corrosion seemed quite localized and was not at the same rate in all digesters. Some of the welded portions were badly corroded while some did not corrode at all. Some parts appeared to be protected by a liquor scale of some kind, whereas quite close to these, severe pitting was observed.

A long and interesting discussion followed. Representatives from different mills explained phenomena observed with their digesters. Conflicting and apparently contradictory experiences were cited. The pattern of corrosion differed from one mill to another. One mill attributed less corrosion due to lime-scale from using dirty white liquor.

Mr. Houghton emphasized the importance of keeping up-to-date records and data on file on as many items as possible, such as, digester filling and cooking techniques, operating temperatures and pressures, liquor characteristics, number of blows, shut-downs, etc.

This will enable the investigators to assess properly all the factors affecting digester corrosion and arrive at right conclusions so that proper remedial measures could be taken.

Disposal of Knots and Screenings

Mr. Houghton, who led this discussion, mentioned three common methods of handling knots in different mills:

(1) Returning knots to digesters for recooking with fresh chips.

(2) Cooking knots separately in small digesters and using pulp in board or other coarse-grade papers.

(3) Sewering the knots to river.

Doubt was expressed that the use of hardwood in the wood charge gave rise to an increased percentage of knotter rejects. But, there was no clear-cut evidence that it was so.

It was also feared that cooking knots with fresh chips might give rise to dirtier pulp with reduced strength properties. However, quite a few mills reported satis-

factory operation with no significant increase in dirt count when knots to the extent of 2.5 to 3% on the wood charge are returned to the digesters.

J. Hart of the Research Institute reported findings of its experiments: 100% chips, 100% knots and mixtures of chips and knots in varying proportions were cooked under the same conditions. The results showed that on an average digester charge about 2% knots based on weight of chips did not make an appreciable difference in pulp yield and quality as compared with figures for 100% chips.

Methods of Using Hardwoods

This discussion was led by Mr. Steeves. The methods differed from mill to mill. At Marathon, they used up to 10%-12½% hardwood in admixture with spruce and jackpine. No detrimental effect on pulp strength was observed. Another mill reported using 75% poplar with 25% spruce and jackpine and operated with conventional equipment without much trouble. Lots of trouble was experienced when using 100% poplar. At KVP, Espanola, they cooked the hard and soft woods separately and blended the pulps by blowing the digesters at the same time. Very good results were claimed, both as regards yield and pulp quality. Their experience was that when a mixture of hard and soft wood was cooked together the yield was much lower. When cooking separately a smaller alkali charge was used for the hard wood. At the Brown Corp. mill at La Tuque they used 70% white birch, 20% poplar and 10% soft wood. All mills reported trouble with washing of hardwood pulp and steam doctors have to be used.



At Kraft Session:

CLAUDE STEEVES (left) Kraft Supt., Marathon Mills, Marathon, Ont., who Chairmaned meeting reported here, and led discussions; and JOHN GRIEVE (right) Supt., Brown Corp. kraft mill, LaTuque, Que., who is Councillor to the Kraft Committee.

ISOTOPES AND ELECTRONS COMPETE:

In the Exhibit area at the Mount Royal for the Canadian convention, isotopes and electrons competed for attention. At left, P. J. STEWART, Radiation Expert, with Isotope Products Ltd., observes corrosion sample, tells about new method of measuring kraft digester corrosion with gamma radiation (as explained in this article). At right: O. J. WALKER, Research Chemist, Northeastern Paper Products, Quebec, talks with C. H. FRASER, Electronic Associates Ltd. on use of beta and gamma tubes in instrument for checking plateau of Geiger-Mueller tubes.



Personals

CANADIAN NOTES

DAVID G. STENSTROM, 65, west coast representative of Celanese Corp. of America and active in the pulp and paper industry 40 years, died following an operation in Victoria, B. C., Jan. 31. He laid the groundwork for the Celanese subsidiary, Columbia Cellulose Co., and recently completed negotiations for the $64,000,000 Celgar Development pulp-newsprint enterprise in southeastern British Columbia. A native of Stockholm, Sweden, Dave Stenstrom was manager of Pacific Mills at Ocean Falls. Later he served St. Lawrence Paper Co. in Quebec and went to Australia to manage a mill. During World War II he was Canadian deputy newsprint administrator and later served Powell River Co. as a consultant.

DAVE ALEXANDER, known to many industry or equipment and supply men traveling in Ontario, died Jan. 4 at Espanola, Ont. He was former manager of the Espanola hotel in that mill town, returned recently from a vacation in his native Scotland and Europe.

A. M. HURTER, project and process engineer of Stadler, Hurter and Co., Consulting Engineers, Montreal, has just returned from Europe.

ARTHUR P. JEWETT, formerly general manager of Provincial Paper Ltd., Port Arthur, Ont., subsidiary of Abitibi Power & Paper Co., has been made vice president of the parent corporation, succeeding *THOMAS A. HENDRY*, retired.

HAMILTON S. CRAIG, who has been director of service operations for Kimberly-Clark Corp. in Canada since his term as general manager for LongLac Pulp & Paper Co., Terrace Bay, Ont., has returned to Neenah, Wis., to join the K-C plant and equipment program section of staff engineering. His appointment was announced by *C. W. NELSON*, director of engineering, who says Mr. Craig will assist in formulation of long-range mill plans.

HAROLD S. FOLEY, president of Powell River Co., has been elected chairman of the western division, Canadian Pulp and Paper Association, succeeding *PAUL E. COOPER*, president of Pacific Mills, and the new vice-chairman is *B. M. HOFFMEISTER*, president of MacMillan & Bloedel.

HAROLD R. CRABTREE, vice-president and general manager of Woods Manufacturing Co., Montreal, has been elected director of Howard Smith Paper Mills.

A. J. PHILIP, 18 years mill manager at Windsor Mills, Que., has been appointed assistant general manager of Canada Paper Co., being succeeded by *EARL RICE* at the mills. *HAROLD BLANCKE*, president, and *GEORGE SCHNEIDER*, vice president, Celanese Corp. of America, in January visited the Prince Ruppert mill and sites of new operations at Edmonton and Castlegar. New vice presidents of Celanese Corp. of America are *KENNETH G. DONALD*, *G. W. SEYMOUR* and *JOHN D. FENNEBRESQUE*.

ROSS DOUGLAS, forester for Alaska Pine & Cellulose Ltd., has been elected president of the Society of British Columbia Foresters.

J. G. CHALMERS, administrative vice president, Bathurst Power & Paper Co., presided over the fourth anniversary dinner of the company's quarter-century club recently in Bathurst, N.B., when *R. L. WELDON*, president, presented awards to 35 employees who became members, among them *JOHN A. HANNA*, assistant manager of operations, and *A. VANDERBECK*, assistant woodlands manager at New Richmond, Que.

G. W. PHIPPS, until recently woodlands manager for Spruce Falls Power & Paper Co. at Kapuskasing, Ont., has been promoted to assistant general manager of the company's woodlands operations and will make his headquarters in Toronto. *G. G. COSENS*, recently manager of Kimberly-Clark and related woodlands operations in Canada, has gone to Neenah, Wis., as general manager of all company woodlands. At Kapuskasing, *F. L. FLATT* has succeeded Mr. Phipps. *J. B. MILLAR*, formerly forester at Kapuskasing but stationed at Neenah in recent years, has been made chief forester for Kimberly-Clark and associated companies.

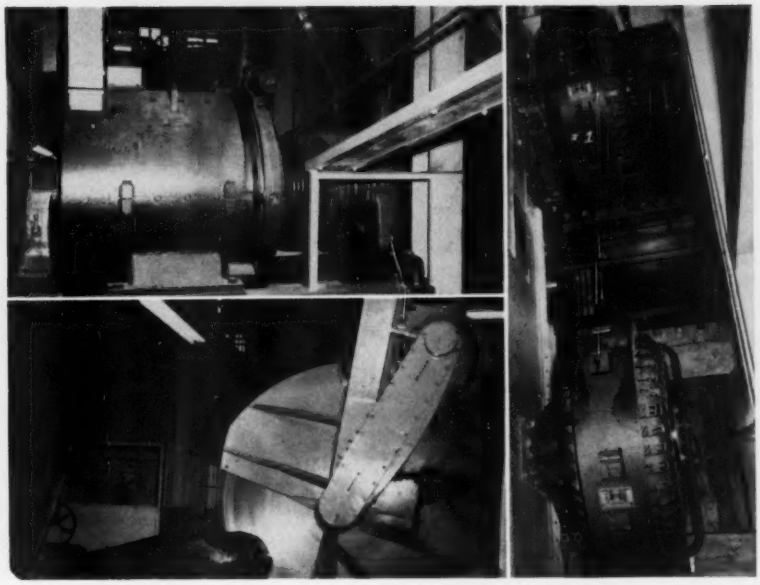
Man uses paper more than any other commodity except water. You are in an indispensable industry.

INNOVATIONS IN WOODROOM

NEW TYPES OF EQUIPMENT IN WEST LINN, PLANT

EQUIPMENT IN WEST LINN WOODROOM: Top left: Westinghouse 120 hp. Rototrol gearless traction type elevator motor, supplied from main motor generator set, which drives log carriage.

Lower left: Cutting log to length with 108 in. Simonds Saw & Steel saw, in Sumner built unit. Right—Two Westinghouse 75-hp. synchronous motors driving twin resaw components. These motors are under main mill floor and were photographed by PULP & PAPER from ground-floor level.



During early 1950, Crown Zellerbach's West Linn, Ore., plant was confronted with a complicated production problem. The plant's wood preparation facilities, most of which had been in operation some 50 years, were becoming inadequate to meet needs for a plant now making over 600 tons of paper a day.

A completely modern wood plant, including whole log hydraulic barker, sawmill, whole log chipper and chip storage were needed. First step was concluded recently when a new sawmill went into production.

This first stage posed many unusual complications—such as building the new wood mill around the old wood mill while, at the same time, keeping the mill supplied.

The new plant sets off shore in the Willamette river between a government locks and a public power plant. The forebay between locks and power plant was drained and cleaned and footing supports were built. This necessitated closing down the old wood mill 24 hours. Its vibration would have prevented concrete from setting.

Three temporary steel conveyors were installed to reroute wood. With the subsequent installation of a whole log chipper, the temporary conveyors and flue will be eliminated.

Old cribbing upstream was removed, the log pond's bottom smoothed out and a 700-foot jetty built of 26- and 20 ft. diameter cells of interlocking sheetmetal piling, filled with rocks and gravel. This jetty increases pond storage area about 300%.

The new mill incorporates some unusual applications of modern processing machinery manufactured by Sumner Iron Works, of Everett, Wash., electrically powered by Westinghouse motors.

Logs enter the mill on Electric Steel Foundry Co. manganese steel chain and chairs riding on strips of the same hard alloy. The plant handles logs up to 24 ft. long. Cut-off facilities include a Simonds 108 in. circular swing saw and an auxiliary 90 in. chain saw using Titan bar.

Moving on to the deck transfer area by conveyor chain, logs are ejected to storage deck by steam-operated kickers. From here they move onto an air-electric powered steel carriage for processing at the 10 ft. band headrig. The carriage has air-operated electrically-controlled hammer dogs, electric setworks, electrically controlled headblocks which operate independently of each other to keep cuts straight in the logs, and air kickers (electrically operated) for pushing cants off the carriage onto live rolls after completion of the last cut.

A New Invention

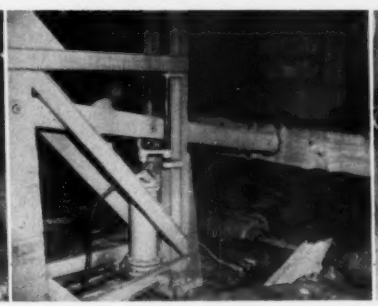
Just behind and to side of headrig, is a new invention—a mechanical offbearer. This machine has an air-controlled pivot arm with toothed end which engages the cant as it is nearly severed from the log. The arm, on a swinging frame, swings with the log; no part of the unit extending be-

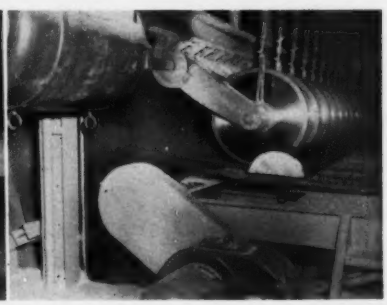
AT WEST LINN: View from backside of Sumner Iron Works—equipped 10 ft. headrig showing steel carriage bringing log to headsaw. At left is mechanical off-bearer, a new innovation in wood mills designed by C-Z men.

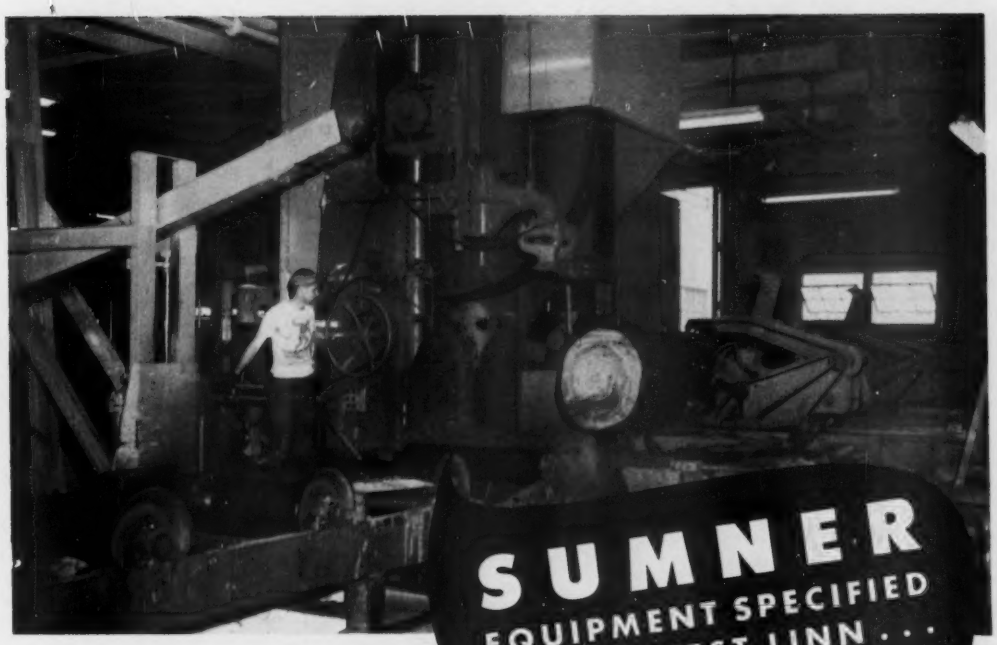
CLOSE-UP OF WEST LINN'S mechanical offbearer. This shows it in action, just after it has positioned a cant flat face down on flared-end live rolls. GEORGE CHARTERS and B. H. MICHELS hold patents on off-bearer.

IN WEST LINN'S new Woodroom, this 11-saw Sumner Iron Works trimmer is shown reducing 24-ft. flitches into two foot blocks. Each of the saw in this trimmer is a 42-in. inserted-tooth slasher type.

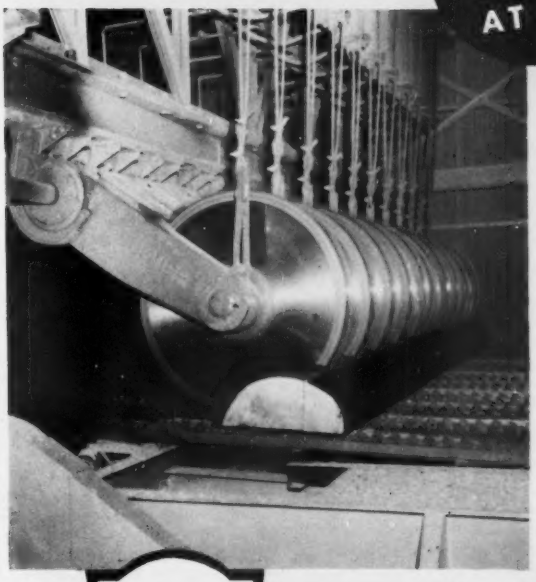








SUMNER EQUIPMENT SPECIFIED AT C-Z, WEST LINN . . .



As a part of their continuing program of plant expansion and modernization, Crown-Zellerbach has specified SUMNER equipment for their new Wood Room at West Linn, Oregon.

Illustrated above are the SUMNER-built Michaels Mechanical Offbearing devices; 10-foot Band Mill; and No-Man Carriage. At left is the SUMNER special design 11-saw chain drive Air-Life Trimmer.

Other SUMNER equipment at West Linn includes a 108" Swing Saw and a Twin Band Rip which accommodates cants up to 60" wide.

Designers and Builders of Pulp and Paper Mill, Sawmill, Boardmill and Shingle Mill Equipment

ESTABLISHED 1892

SUMNER IRON WORKS

EVERETT, WASHINGTON

yond the sawline. The offbearer forces severed cants onto the live rolls with sawed face down, thus freeing the headrig offbearer (who operates this mechanical counterpart) of heavy and time-consuming handling. Rolls are flared on a curve, one end only.

This new equipment was originally designed and patent applied for by personnel of CZ's Camas, Wash., mill—George W. Charters, assistant resident manager, and B. H. Michels, woodmill superintendent. Sumner built the machine.

Cants go to twin band resaw for reduction to 12 in. or less. The resaw unit uses two 72 in. band mills, one right-and one left-hand machine. The right-hand mill is stationary, but the other mill has a travel range of 24 in. to facilitate optimum positioning of cuts in larger cants. This twin unit has capacity for processing 60 in. cants. A movable line-up guide ahead of the resaws enables the sawyer to line up cants with the saw (or saws) for optimum saw-line location. Guide lights indicate the vertical plane at which cuts will be made. Resawed stock is reduced to 2 ft. blocks as it passes a trimmer with eleven 42 in. saws.

Block wood goes to drum barkers and chipper as did wood from the former



ASSISTED IN DEVELOPING new woodroom device — GEORGE W. CHARTERS, Asst. Res. Mgr., Crown Z, Camas, Wash.

breakdown plant. Plans call for installation of a Bellingham type hydraulic barker, whole log chipper, and additional chip storage capacity.

Westinghouse units include a Rototrol gearless carriage drive, 300 hp. synchronous motor on headrig, 75 hp. synchronous motor on each band resaw component; 200 hp. motor on trimmer; motors in conjunction with Sumner gear reducers for heavy drives, and gearhead motors for lighter drives.

W. H. Rambo, Portland, Ore., plant engineer, was in charge of mechanical design and arrangement; CZ's Central Engineering in Seattle did structural design.

MAJOR ELECTRICAL EQUIPMENT

By David C. Fulton

Industrial Dept., Westinghouse Electric Corp.

Major electrical equipment installed with the new Crown Zellerbach Corp., West Linn woodmill includes a Westinghouse 120 H.P. log carriage drive, 300 H.P. main band mill drive, two 75 H.P. twin band mill drives, a number of gearmotor drives ranging from 7½ H.P. to 30 H.P., and 600 volt, A.C. metal-clad control center equipment together with the auxiliary equipment including panelboards, control stations, etc.

The heart of the log carriage drive is a 120 H.P. gearless traction type elevator motor which is supplied from a main motor generator set. The 100 kilowatt motor generator set has sufficient capacity to commutate 250% full load current for 1 minute and is driven by a 150 H.P. induction motor. A three-unit auxiliary motor generator set includes a 7½ kilowatt exciter, 15 H.P. induction motor, and Rototrol to force rapid acceleration and current limit features. The D.C. control equipment is contained in a single metal-enclosed cubicle installed near the main drive equipment. This D.C. control equipment is straightforward in design with a minimum of moving parts, following modern design practice.

A 300 H.P., 80% power factor synchronous motor is coupled to the main band mill and a 75 H.P., 80% power factor synchronous motor is coupled to each of the two sections of the twin band mill. These motors have high torque characteristics to accelerate and hold the motors in synchronism when operating with the connected inertia load of the band mills.

The conveyors, chains, rolls, log haul, etc. are driven by gearmotors having totally enclosed fan cooled NEMA Class D motors with high torque, high slip, low starting current characteristics.

A separate room has been provided to house the 550 volt A.C. metal-clad control equipment together with the band mill synchronous motor field excitation motor generator sets. Space has been provided in this room for a future transformer addition.

Recommended spare parts have been procured to insure continued operation of the mill in the event of emergencies.

Officers Named For New Mill in Mexico

Henry S. Dabdoub, Mexican industrialist, has been elected president of the new company, Sonoco de Mexico, operators of the new subsidiary mill of Sonoco Products in Mexico City. Vice president, treasurer and general manager is Joel Dean Ferry. Secretary is Ernesto Santos Galindo.

It was expected the paper machine would be in production by around Jan. 1, 1952.

Mill Fire Damage

Pacific Paperboard Co.'s 3-machine plant at Longview, Wash. suffered severe damage from fire Jan. 11. The loss, estimated by company officials at $3 million, included destruction of paper machine room, converting section, wastepaper dock, machine shop, laboratory and store room. A steel water tower and welding shop were damaged. Little or no damage was sustained by steam plant, electrical shop, carpenter shop, garage shop, pumping stations and office.

New Reliance V*S Drive Bulletin Issued

Pointing up the efficiency-improving, cost reducing advantages that packaged, all-electric, adjustable-speed drives bring to a wide range of production machines and processing equipment, a new, 8-page, attractively-illustrated booklet has been issued by Reliance Electric & Engineering Co.

The booklet, identified as Bulletin D-2311, presents a simplified, easy-to-read, non-technical explanation of the Reliance V*S Drive, its "economics," application versatility, and operational flexibility in providing adjustable speeds from A-c. circuits. Copies are available on request. Write to Reliance Electric & Engineering Co., 1088 Ivanhoe Road, Cleveland 10, O.

Planned Tonnages for New Celanese Mills

Four hundred tons of kraft pulp and more than 200 tons of newsprint daily are expected capacities of the projected Celanese Corp. of America mills in the Castlegar area of southeastern British Columbia, near Trail. It is understood Castlegar will be the site of one of Western Canada's most fully integrated forest enterprises, with provision for sawmill and plywood plant and subsidiary activities. The mills will have access to a vast area of pulpwood while Consolidated Mining & Smelting Co.'s $30 million power plant at Waneta will furnish abundant energy.

Meanwhile Celanese's Prince Rupert dissolving pulp mill (Columbia Cellulose) is being enlarged, and the plant of Canadian Chemical Co.

Mr. Blancke stated that the Canadian program of Celanese Corp. has been predicated on the belief that Western Canada presents an unparalleled opportunity for growth and that the company can share in that growth only to the extent that it contributes to it. "We propose to continue these contributions in the form of capital, industrial experience and technical skills," he said.

Power for the pulp and newsprint mills will be supplied by West Kootenay Light & Power Co., a subsidiary of the mammoth Consolidated Mining & Smelting Co., whose metallurgical plant at Trail, within a few miles of Castlegar, is 440 miles east of Vancouver. Some of the hydro-electric energy will be from Consolidated's $30 million power development on the Pend Oreille River now under way.

Preliminary engineering on the project has been carried out by Sandwell & Co. of Vancouver and Seattle.

Gair's Plant Completed

The new corrugated shipping container plant of Robert Gair Co., Inc. at Teterboro, N.J., has been completed and went into operation Jan. 28, according to a statement from George E. Dyke, Gair's president. The new plant is called the Teterboro Corrugated Box Division of Gair, and will be headed by F. C. Costello, manager, C. Burke, superintendent, and T. Kamish, sales manager.

LORAIN TL's

LEAD THREE LIVES AT DRYDEN PAPER CO.

DRYDEN, ONTARIO

• Dryden Paper owns 3 Lorains. Two are in the "TL" series and were bought primarily for loading pulpwood. But their convertibility and adaptability soon developed other uses. Now the two "TL's" do many jobs. See below how they serve *3 ways.*



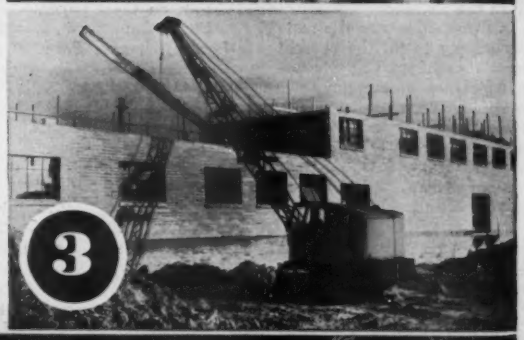
1. LOADS PULPWOOD...

Here, the Lorain TL25-J with grapple loads trucks from winter stockpiles for delivery to mill pond. Because Lorains will handle any size or type wood faster, with savings in manpower and with greater safety, this is the primary job of the machine.



2. EXCAVATES...

When a 25,000-yard excavation job developed for mill addition at the St. Regis plant, Dryden Paper Co.'s second TL was moved from pulpwood handling and converted to a dragline to dig and load material into trucks.



3. ERECTS STEEL...

Up goes the new plant . . . and the Lorain-TL that loads pulpwood (1) above, is used here as a crane to handle steel, lumber and building materials.

Here are 3 entirely different uses for the same type of Lorain. This is real interchangeability — real versatility — saving equipment investment and lowering operating costs. Lorains are available in lifting capacities up to 45 tons — on crawlers or rubber-tire mountings — interchangeable to shovel, crane, clamshell, dragline or hoe to fit your needs. See your nearest Thew-Lorain Distributor for full details.

THE THEW SHOVEL CO., LORAIN, OHIO

THEW LORAIN® CRANES *for* PULPWOOD HANDLING



All across the North American continent, north to south and east to west, the industry is improving woodlands technics and introducing large scale conservation, reforestation and mechanization.

SOUTHERN PROBLEMS AIRED

PORTER ELECTED NEW ASSOCIATION PRESIDENT



AT ATLANTA MEETING (l to r): R. V. MILES JR., Gulf States, was Toastmaster; EARL PORTER, International, elected new President; ARTHUR G. WAKEMAN, Coosa River, who presided; H. J. MALSBERGER, Gen Mgr.; KEN TROWBRIDGE, No. Carolina Pulp, re-elected Director; TOM BUSCH, International; LLOYD HALL, International, elected Director, and EDMUND HAWES, lumberman, saw city jobs as detriment to small ownership.

While at the time practically every mill in the South was overwhelmed with a flood of pulpwood, the discussions of the Southern Pulpwood Conservation Association at its Atlanta annual meeting, Jan. 16, were over-shadowed with future demand problems for the expansions of the industry now in the making.

Significant in discussions was the matter of seedling supply to fill the current planting demands each year now overstripping the capacities of the nurseries though totals run well up into the millions. In fact, serious discussion of the needs of the South for re-planting reverted to "acres" it being pointed out that it would require perhaps 75 years to complete the task ahead at the present rate.

J. H. Keener, association president (Champion Paper & Fibre Co.), gave a brief summarization of the organization's work before turning the rostrum over to Arthur G. Wakeman, vice president (Coosa River Newsprint Co.). Henry J. Malsberger, general manager and forester, reported the association's work is bearing fruit because more small owners are asking for guidance in better cutting practice.

Frank A. Albert, assistant Southern regional forester (Atlanta), urged that each Southern regional forester (Atlanta), urged that each Southern state forester draw together those interested in the state in support of a strong, effective program of fire control and timber management. He placed Southern pulp production in 1949 as 6,019,000 tons and projected production in 1953 at 10,418,000 tons. With this, pulpwood consumption was predicted as to rise from 9,028,000 cords in 1949 to 15,981,000 cords (12,928,000 pine and the rest hardwood) in 1953. His table is shown on these pages.

Forest fire control, according to Fred H. Long, Arkansas Forestry and Parks director, is essentially a police power to protect the citizen, and the state is the agency to not only administer it but should assume the cost.

Salvaging Eroded Land

Earl Porter, woodlands department manager, Southern Kraft Div., International Paper Co., cited the method followed in accomplishing the terracing of Alabama's eroding farm lands within five years as an example of what can be done to get the South's idle acres back into trees. He quoted the system advocated by Dr. L. M. Ware, Alabama Agricultural Experimental Station, of having Future Forest Farmers and county schools to raise seedlings (including collecting seeds) and inducing each farmer to plant two acres annually. Mr. Porter cited successful campaigns whereby the goal was accomplished through perseverance and ingenuity.

Economical methods of controlling or eliminating low grade forest stand were recounted by L. E. Chaiken, silviculturist of the U.S. Forest Experiment Station, Charleston, S. C.

E. T. Hawes, vice president and chief forester, West Lumber Co., Atlanta, Ga., said two difficulties encountered in small

TRENDS OF PULP PRODUCTION AND PULPWOOD DRAIN IN SOUTH

Since 1945, Projected to 1953, Including Present Planned Expansion

	1945 (1)	*1949 (1)*	*Percent Change*	*Planned Change 1949-53*	*Percent Change*	*Possible Increase 1949-53*	*Percent Change*	*Planned Total by 1953*
Pulp Production (tons)	4,887,000	6,019,000	23	3,572,000	60	4,399,000	73	10,418,000
Pulpwood (cords)								
Pine	6,510,000	8,240,000	27	3,706,000	45	4,688,000	57	12,928,000
Hardwood	822,000	788,000	—4	1,960,000	250	2,265,000	287	3,053,000
Total	7,332,000	9,028,000	23	5,666,000	63	6,953,000	77	15,981,000

(1) Report, U. S. Forest Service Experiment Stations and Southern Pulpwood Conservation Association.

• Rated mill capacity and wood consumption.

This table is not official U. S. Forest Service compilation. Compiled by Frank A. Albert.



LODDING DOCTORS

* * Under the waterfall—
Lodding Doctor.

Precision that avoids premature wire changes. First on the machine. First in performance.

LODDING ENGINEERING CORPORATION
WORCESTER, MASSACHUSETTS
REPRESENTED BY
W. E. GREENE CORPORATION • WOOLWORTH BLDG., NEW YORK



AT ATLANTA (l to r): C. H. FLORY, So. Carolina State Forester; D. V. LOGAN, I.P., Natchez, a Director; CHARLES CONNAUGHTON, Atlanta U.S. Forester; J. H. KEENER, Champion, retiring President; RUSS ANDREWS, I.P., Mobile; CLAUDE LOVELESS, Birmingham banker and participant; L. E. CHAIKEN, U.S.F.S. speaker; and J. A. SMITH, I.P., Troy, Ala.

owner forest management promotion are (1) absentee ownership principally due to lack of rural compared to industrial employment and (2) sale of trees in bulk to finance some urban business.

R. V. Miles, Jr., of Gulf States Paper Corp., Tuscaloosa, Ala., was toastmaster at the banquet.

Porter Elected President

Earl Porter was elected new president. Guy Curtis, Gaylord Container Corp., Bogalusa, La., was elected vice president.

Directors elected for 1952: R. W. Wortham, Jr., Southland Paper Mills; W. C. McDonald, Southern Advance Bag & Paper; W. J. Bridges, Jr., Hollingsworth & Whitney; D. V. Logan, International Paper, Natchez, Miss.; N. R. Harding, Macon Kraft Co.; J. H. Graham, West Virginia Pulp & Paper, Charleston; T. W. Earle, Gair Woodlands Corp., Savannah; K. S. Trowbridge, North Carolina Pulp; A. L. Wenrich, Continental Can, Hopewell; R. C. Barienbrock, Mead Corp., Kingsport, Tenn.; Mr. Porter, Mr. Curtis and Mr. Keener.

BIG WOOD JOB AHEAD FOR SOUTH

Skepticism as to whether forest fire control in the South has been stabilized to the extent projected as a major factor in the supply of pulpwood for the projected expansion of the industry there, based upon applications for defense certification, was voiced by Chas. L. Tebbe, U. S. Forest Service, Washington, D.C., to a recent meeting of the Society of American Foresters in Biloxi, Miss.

As of mid-December, he said, 314 expansion applications involving 1½ billion dollars in facilities had been made in forest products field. Of these 100 applications of 575 million dollars had been approved; 49 rejected. The residue pending was 165 of 780 million dollars.

"While the planned expansion in other regions has been large, circumstances have been such as to soften the impact upon the resource," he said, but added: "In the South it is different. Virtually all of it entails new pulp production and hence timber drain. Here is where much of the pulp will be produced to support the rayon textile and non-integrated paper mills throughout the country. No foreign pulpwood is in prospect, nor is there any huge volume of logging leftovers as there is in the West to lessen the impact on standing timber.

"The size of the undertaking may be gauged by the number of planned new facilities, 89 valued at 800 million dollars. These include 59 pulp expansions, 14 paper expansions, 4 rayon Textile plants, and 9 small lumber, veneer and other installations. Of the applications for new or expanded pulp mills, 27 representing 322 million dollars and 2¼ million tons have been finally certified by DPA. There have been a few denials, so 30 applications still pending represent an additional 325 million dollars of planned investment and 2 million tons of pulp. Wood requirements for approved and pending pulp mills are in the neighborhood of 6½ million cords.

"As in other parts of the country, the Forest Service has studied and reported on the adequacy of the timber resource to support each of these expansions. Pine timber growing stock was the important consideration because so much of the expansion is planned to be based on pine, and because of the general overdraft on this species throughout large areas by existing industry. The Forest Survey discloses a current surplus of pine timber growth over drain in some areas, but totally insufficient to sustain all of the planned additional drain from those areas.

"The important thing to bear in mind is that these pine-based expansions are planned and are being installed on the strength of *prospective* growing stock. So in a very large sense the wood is on order. It must be produced before it can be utilized.

"The South does not yet have the degree of fire protection necessary to achieve the assumed future growth," he said. "It does not have the assumed planting program, and more important the full amount of the growing stock that is to yield the assumed growth is not yet in being. The South does not yet have the widespread management practices, nor the education and technical assistance programs that will be needed.

"The impact of an 800 million dollar expansion program by the pulp and pulp products industries will be great and it will be felt in many ways. More of the South's hardwoods, unsuited to other uses, will be converted to pulp and pulp products with advantage not only to the stand, if properly harvested, but to employment and income opportunities in the region. One of the finest and most satisfying aspects of the current expansion is planned utilization of 2.4 million cords of hardwood pulpwood, about 35 per cent of requirements. The large pulp expansion will intensify the scramble for open market stumpage and increase pressure on the land that supplies the open market—the smaller ownerships."

Oil Derrick—Fire Towers

Acquisition of 35 second-hand oil derricks has been effected by the Georgia Forestry Commission for conversion into fire towers, according to Guyton DeLoach, state forester. The transformation of the derricks into fire towers will save Georgia taxpayers $28,000 as well as make possible extension of the program during steel shortage. The use of old fire towers in this capacity was reported by PULP & PAPER in its May, 1951 issue in reporting woodland management methods of International Paper.

Fibreboard Timber

Headquarters for the timber division, Fibreboard Products, Inc., is now at the main office in San Francisco, where C. L. Morey heads the division as manager. Timber holdings and operations are in California, in the Sierra and coastal areas, and in Washington on the Olympic peninsula.

C. E. Wood heads up log procurement in California, assisted by R. L. Helgeson. Irl Harcourt heads procurement of waste wood. A. N. Hartnagel manages log procurement on the Olympic peninsula and P. G. Pearson is superintendent in that area.

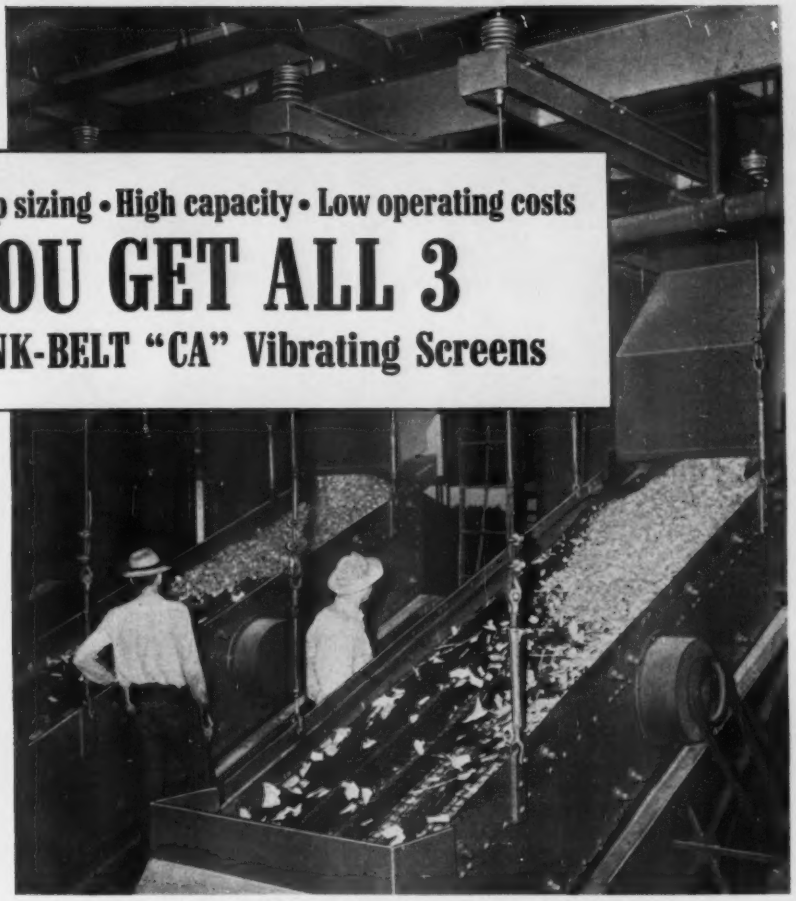
Attack on Spruce Budworm in Canada

New Brunswick International Paper Co. is co-operating with the New Brunswick government in an assault against the spruce budworm which has ravaged wide areas in Quebec and the Canadian maritime provinces. The company's immediate program is to spray 300 square miles of threatened Crown forest along the southeast Upsalquitch River. An airfield was hewn out of the wilderness to serve the twenty or more planes that will be used in Canada.

Accurate chip sizing • High capacity • Low operating costs

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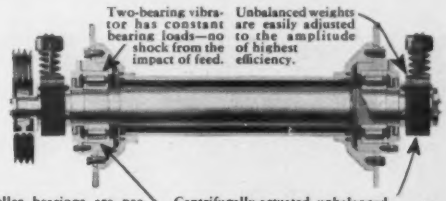
with LINK-BELT "CA" Vibrating Screens



Two of four Link-Belt CA Vibrating Screens handling ⅜" x ¾" pine chips. Each screen does an efficient job of sizing 16 cords of chips per hour.

Yes... the efficient two-bearing operation of Link-Belt CA Concentric Action Vibrating Screens offers real economies in the screening of wood chips. Positive circular action of the vibrator provides quick bed stratification . . . maximum sizing opportunity for every particle. Sharp separation of slivers and sawdust is assured.

And you'll like the lower power and maintenance costs, thanks to two-bearing simplicity. If you are faced with a screening problem, call the Link-Belt office near you. A Link-Belt engineer may be able to offer you a money-saving answer.



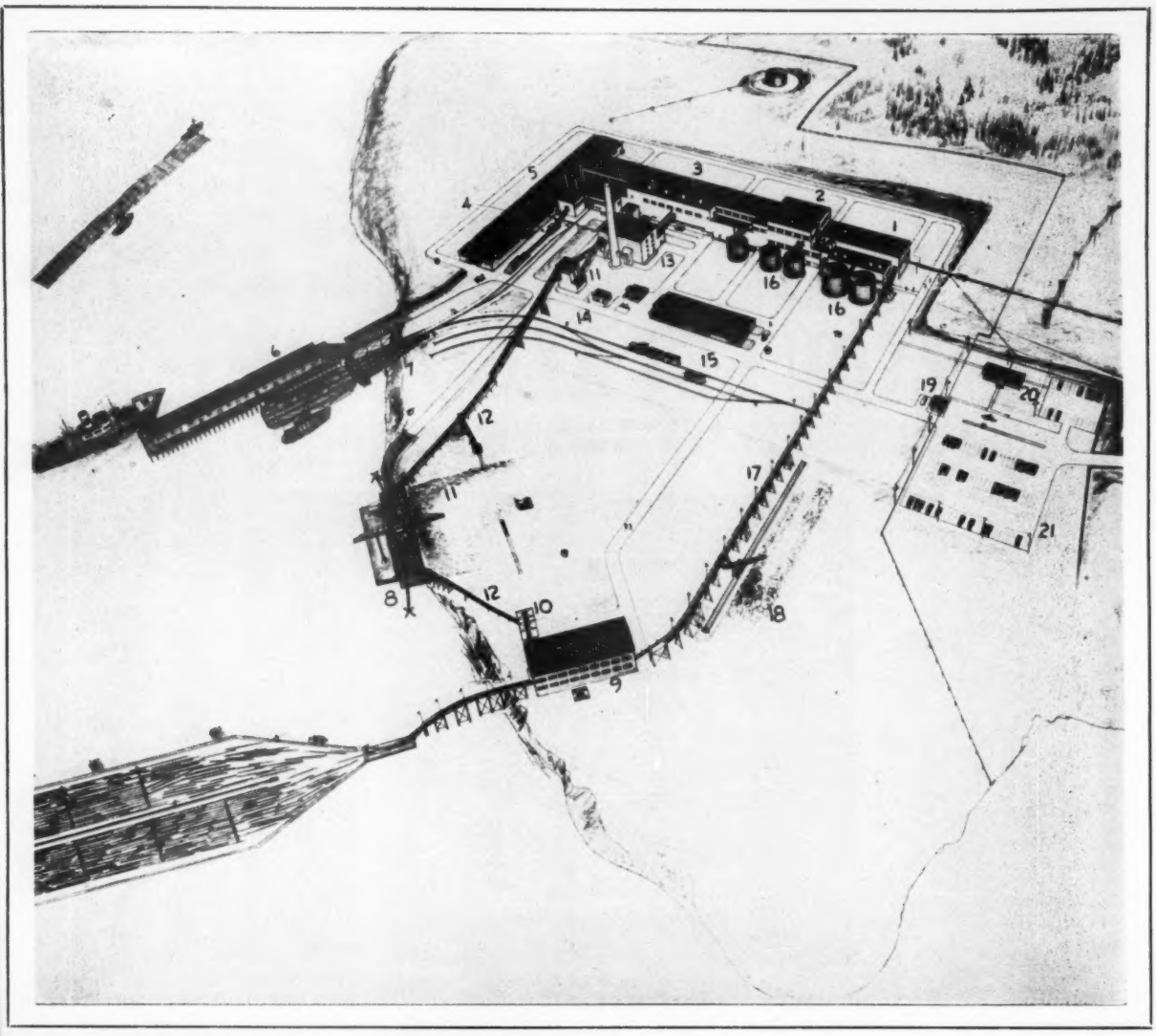
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ELK FALL'S CO.'s newsprint mill at Duncan Bay, B. C., near mouth of Campbell River on Vancouver Island, is expected to reach production in a few months. Construction of a Kraft pulp mill is planned soon, too.

Shown in sketch are:

1. Groundwood Mill
2. Screen Room
3. Machine & Finishing Room
4. Conveyors to Sulfite Repulper
5. Roll Storage
6. Shipping Dock
7. Car Barge Dock
8. Scow Dock
9. Wood Room & Log Haul
10. Hog Building
11. Hog Fuel Storage
12. Hog Fuel Conveyors
13. Boiler House
14. Lub. Oil & Paint Stores
15. Repair Shop & Stores
16. Stock Tanks
17. Block Flume
18. Block Storage
19. First Aid & Gate Guard
20. Office Building
21. Parking Lot
22. Sub-Station TS8
23. Construction Camp



PANDIA INC. is new name for Paper and Industrial Appliances, Inc., New York firm active in the pulp and paper field. Pandia Inc. is headed by (left to right above) Audenried Whittemore, President, Leonard G. Durant, Vice President, and R. G. Goodwin, Director of Sales Engineering. The company is represented in Canada by Alexander Fleck.

Superintendents To Meet

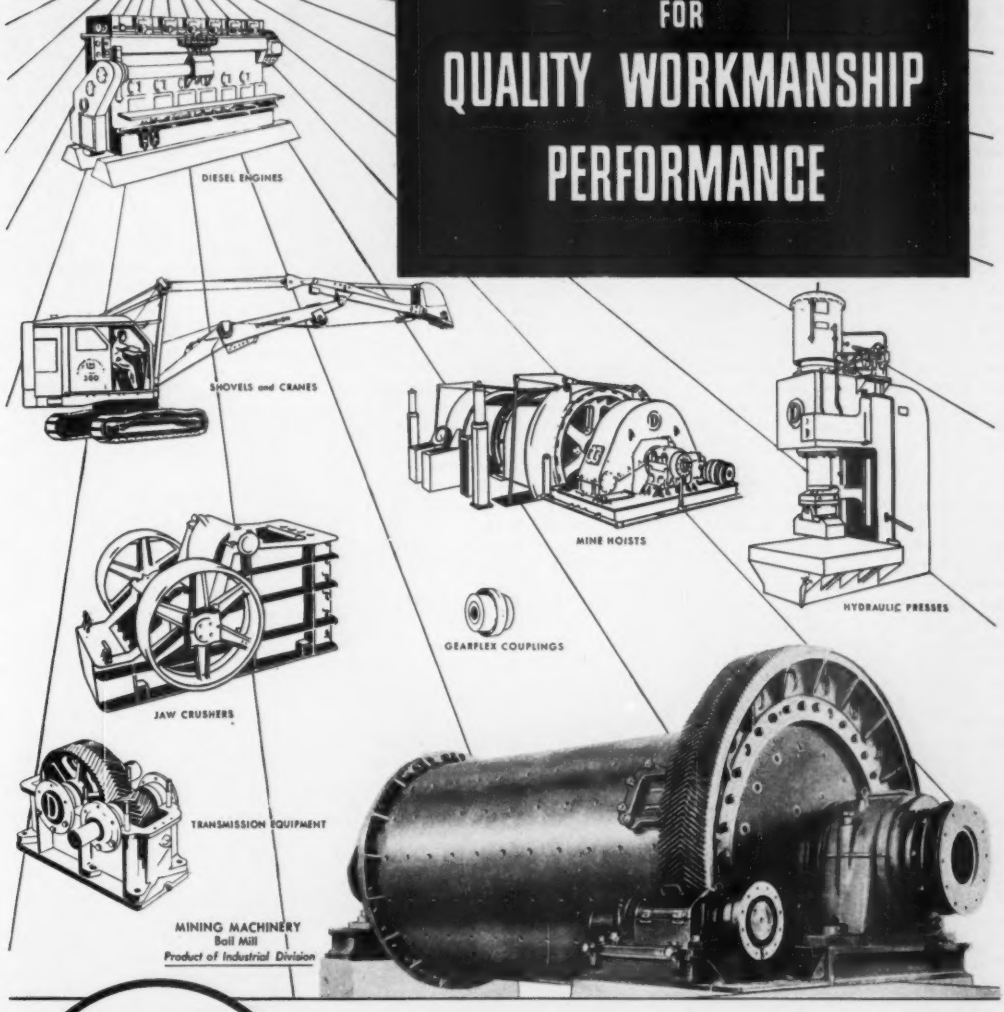
Elmer Mitchell, Glassine Paper Co., Philadelphia, announces that the Penn.-New Jersey-Delaware Division of Superintendents, of which he is chairman, will hold its 1952 spring meeting May 9-10 at Yorktowne Hotel, York, Pa.

Hercules Plant

HERCULES POWDER CO. has opened a new unit in Savannah, Ga., for the production of Kymene 138 and Kymene 234, wet-strength resins for paper. .....

Bowater's Newfoundland Pulp and Paper Mills, Corner Brook, Nfd., plans to spend $10 million during the next two or three years in further expansion designed to increase newsprint and sulfite pulp production. One or two more digesters will be built, together with additional screens, etc.

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News and Notes from ▣ ▣ ▣

EQUIPMENT AND SUPPLY COMPANIES

Equipment and Supply Men

E. A. YAEGER has been appointed assistant vice president of National Distillers Chemical Corp., New York City. His company is completing a new plant at Ashtabula, Ohio, which is expected to begin production of sodium peroxide for the pulp and paper industry early this year.

PETER J. ABEL has joined sales engineerring staff of The Sandy Hill Iron & Brass Works, Hudson Falls, N. Y. Mr. Abel has been associated with this industry through the Stickle Steam Specialties Co. for 25 years, and will continue to represent that company.

JOHN R. HOOVER has been elected president of B. F. Goodrich Chemical Co., Cleveland, O., and *JAMES RICHARDS* has been named to succeed him as sales vice president. Mr. Hoover has been with Goodrich since 1925 when he graduated from Harvard, and was made vice president in 1945. He was a president of the Plastic Materials Manufacturers Assn. Inc. before its consolidation with the Manufacturing Chemists Assn.

ANGUS J. GARDNER has been named assistant vice president in charge of sales for Rice Barton Corp., Worcester, Mass., according to an announcement from *CHARLES SUMNER BARTON*, president. Mr. Gardner was for many years with International Paper Co. and the Great Northern Paper Co. He will make his home and headquarters in Worcester.

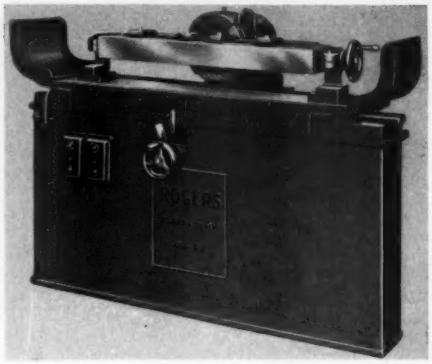
KENNETH C. TOWE has been elected president of American Cyanamid Co. to succeed the late *RAYMOND C. GAUGLER*, who died Jan. 11. Mr. Towe has been with American Cyanamid since 1926, and was serving as vice president in charge of finance.

Recent technical appointments by Hooker Electrochemical Co. include: *ABRAM DAVIS*, research chemist: *BERYL B. McKOWN*, technician in the physical laboratory; *THOMAS HOOKER*, chemical engineer; *WILLIAM F. HARVEY*, mechanical engineer; and *EDWARD J. KALETA*, draftsman.

F. C. Huyck & Sons, Rensselaer, N. Y., announce appointment of *PHILIP E. ANDERSON* as their representative in Wisconsin, Minnesota and upper Michigan. Mr. Anderson succeeds *BYRON A. YULE*, retiring after 21 years with Huyck.

G. A. TALBOT has been appointed sales manager, *CALIFORNIA COTTON MILLS CO.*, Division of National Automotive Fibres, Inc., with headquarters in Oakland, Calif. Mr. Talbot is the son of W. J. Talbot, formerly sales manager of the California Cotton Mills. G. A. Talbot has been with the company five years. .....

CHAIN BELT CO. of Milwaukee announce what it describes as the first basic improvement in years in belt conveyor idlers greasing design. Rigid steel grease piping has been replaced by reinforced flexible automotive type grease tubing, which will take higher gun pressures, and will not be broken off in shipment. The flexible sections are made in lengths which allow them to "hug" the inside of the inverted angle or channel base. Grease tube extension to the far side is accomplished by threading a flexible section through the base to the grease fitting at the near side. New, also, is the location of the grease fittings. They are placed so as to be more accessible, permitting safe servicing at any time. For further information write Chain Belt Co., 1699 W. Bruce St., Department PR, Milwaukee 4, Wis. .....



NEW ROGERS "NT JUNIOR" combines speed and low cost for precision grinding of paper cutting and other straight knives. It is intended for light-duty work and incorporates many advanced Rogers grinding features to give efficiency and economy. One feature is separate reversing motor which drives the sturdy reciprocating knife table assembly. For further information contact Samuel C. Rogers & Co., 193-210 Dutton Ave., Buffalo 11, N. Y.

MERRICK SCALE MFG. CO., manufacturers of automatic continuous weighing machines at Passaic, N. J. has issued a new bulletin, No. 851, obtainable on request which illustrates and describes various applications of Merrick Weightometers and Feedoweights. .....

REICHHOLD CHEMICALS, INC. announces receipt of a necessity certificate providing $1,475,000 for expansion of Reichhold Chemicals', Inc. phenol producing plant in Tuscaloosa, Ala. It was announced by Henry H. Reichhold, chairman of the board. .....

A new *FOSTER WHEELER CORP.* catalog on package steam generators has been issued by the New York firm. The introduction of a package steam boiler was a very radical departure for Foster Wheeler. Its success has been very gratifying to the company, officials say. .....

New improved *MANHATTAN SINGLE GROOVE V-BELTS* are described in a new bulletin issued by Raybestos-Manhattan, Inc., Manhattan Rubber Division, Passaic, N. J. Copies may be obtained by requesting Bulletin 6830 B. .....

ALLIS-CHALMERS has a TEFC with construction features and details of Allis-Chalmers totally-enclosed, fan-cooled motors with tube-type, air-to-air heat exchangers in ratings from 40 hp. at 600 rpm through 800 hp. at 3600 rpm described. The bulletin points out that the motors are available in standard and explosion-proof designs. The former are for applications without explosion hazards but requiring protection of the windings from dust, dirt, acid fumes, etc. Copies of "Allis-Chalmers Totally-Enclosed Fan-Cooled Motors with Tube-Type Air-to-Air Heat Exchangers," 51B7149B, are available from Allis-Chalmers Mfg. Co., 995 S. 70th St., Milwaukee, Wis. .....

HEPPENSTALL CO., steel forgings manufacturer, has established at 734 Asylum Ave., Hartford, Conn., a new Eastern sales headquarters with George H. Wurster in charge, assisted by E. V. Alderson, Peter Della-Donna, Harvey Neale, and Elizabeth W. Mann. .....

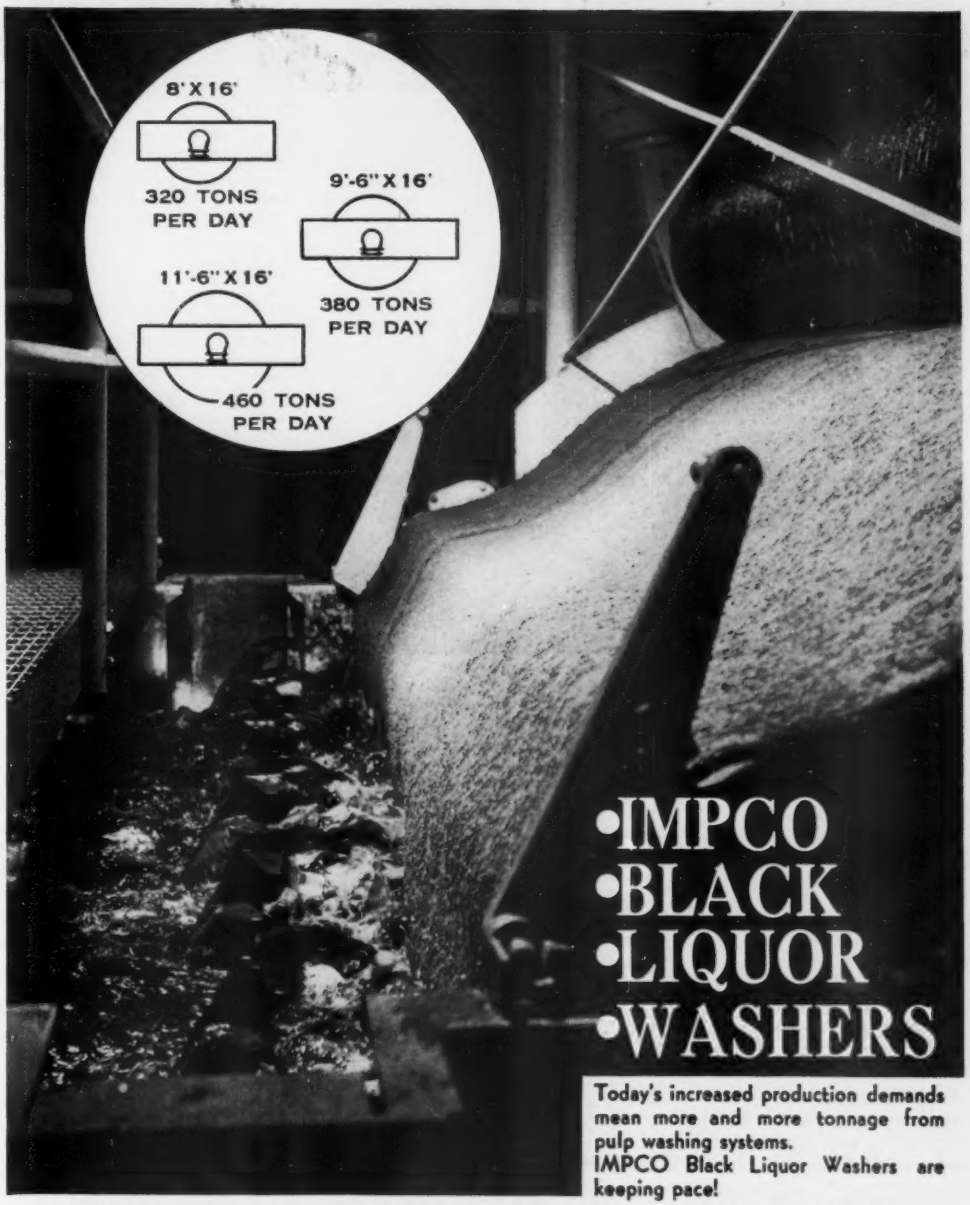
F. C. HUYCK & SONS, (Kenwood Mills), Rensselaer, N. Y., has arranged to acquire the Joseph Noone's Sons Co. of Peterborough, N. H., according to Grenville R. Holden, president of Huyck. The purchase of the assets of the Noone Company includes the mill at Peterborough and all the stock of its sales agent, the William R. Noone Co. of Boston, Mass. The Noone plant has operated continuously since 1831 in the production of industrial mechanical cloths. .....

In addition to the hydraulic whole log barker which first brought the Hansel company into prominence, the company has introduced a new high speed pulpwood barker, a slab barker, a combined slab and pulpwood barker and an economically operated sawmill barker. First high speed pulpwood barkers will soon be installed in the South. .....

LINK-BELT LIMITED announces that it has erected a new building on an 11½ acre site on Boundary Road. Burnaby, B. C., adjacent to Vancouver, B. C., and has moved its Vancouver office and factory branch store to these larger quarters. H. J. Harris will continue to direct the sales and engineering service activities of the Vancouver office with which he has been associated since its establishment in 1930. ..

DE LAVAL STEAM TURBINE CO. has announced the appointment of Vancouver Engineering Works, Ltd. as their exclusive representative in British Columbia. Vancouver Engineering Works, Ltd. has been established in British Columbia for 22 years, and are well-known in all of Western Canada for their engineering and manufacturing ability. They will handle products of De Laval Steam Turbine Co. including centrifugal pumps, centrifugal blowers and compressors, steam turbine, De Laval IMO rotary pumps, speed reducers and flexible couplings. .....

KEEPING PACE!



Today's increased production demands mean more and more tonnage from pulp washing systems.
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J–20



SNAPPED AT CANADIAN SESSIONS (left to right): JAMES A. SMITH, Rotoseed Corp., who gave paper on the "Deculator"; A. E. H. FAIR, Pres. and Mgr., Alliance Paper Mills, and Don Valley Paper, a principal in Material Handling session; D. D. HALL, Materials Handling Mgr., The E. B. Eddy Co., also a participant; H. W. DOWNS JR., Union Screen Plate Co. of Canada; L. M. MORGAN, Brompton Pulp & Paper, and H. G. CALDWELL, The Mead Corp., Chillicothe, O.

CANADA

(Continued from Page 48)

felt to add to cross grain quality.

On the effect of entrained air, and how to remove it and to prevent foaming and flocculating, it was determined that the mixing box should be kept as close to the cylinder vat as possible, with a maximum length of straight pipe approaching the vat of 7-14 feet. It was felt that excess speed of fan pump also increases foaming, and that a variable speed pump here is an advantage.

One observer that had made a particular study on entrained air said that bubbles of air are relatively easy to get out but the finely divided air more difficult. They determined that most of the air in their stock was coming from the return white water from the cylinder molds, and and that screens in general—both flat and rotary types—were effective in elimination of this air. This observer said that air mainly interferes with drainage, and that with a free sheet the finely divided air doesn't disturb formation. To avoid air entrapment, he suggested that all pipes be sloped in direction of flow with a slope of at least ¼-in. per foot, and with ⅜-in. Preferable, and with opportunity afforded to bleed pipes frequently into the white water lines. This sloping gives air bubbles a chance to rise to the top and to be bled off. From point of last mixing, he recommended that the stock be pumped direct to the vat.

On consistency of filler and liner stock, it was felt that this consistency should be the same for both to get good formation, and that near .25 consistency was the ideal.

One operator said that he got his best production during the middle of winter with temperatures at 35 degrees, and the general consensus was that lower temperatures in the vat did help prevent picking. One recommendation was for a vat temperature of 100 degrees for waste paper and 80 degrees for groundwood. Most members reported that they use temperatures between 55 and 70 degrees F.

In cleaning of cylinder molds, one West Coast mill was reported to have used a high pressure hose twice a day in cleaning its stainless molds, with a life of 9 years. It was pointed out, however, that this mill was running virgin pulp making milk bottle stock, and was, therefore, an exceptional example. Varsol, carbon tetrachloride and kerosene were used by some of the operators encountering asphalt in their waste stock.

For type of showers in use with cylinder molds, it was determined that low volume with high pressure—from 60 to 125 lbs.—was best, and one suggestion was to have temperatures close to 125 degrees F.

Using 316 stainless over bronze spiders, one operator said no electrolytic action was observed on rods, winding wire, and face wires on cylinder molds. However, trouble had been encountered previously using some other stainless steel combinations.



AT CANADIAN MEETINGS (left to right): WARREN CHILSON, Curlator Corp., Rochester, N. Y.; S. H. MAHALAHA, a Forester from India who was going to Southern U. S. before returning to National Newsprint & Papermill Ltd., India mill being built by Ebasco; JOHN H. McDONALD, Canadian Engineer for Ebasco Services; R. G. GOODWIN, Pandia Inc., New York (formerly Paper & Ind. Appliances); L. L. FITZPATRICK, Alexander Fleck Ltd.; J. L. LACOMBE, who received award for The Barrett Co. Ltd., his mill, for being safest mill in Canada in its class.

Felt and Wire Life

This same operator reported use of 50 mesh wire for top liner cylinders and 40 on filler stock. With 50 mesh wire, got wire marks through the top even when used only on bottom liner. Use of a direct flow cylinder was considered to be part of the cause for wire marking. Varying speed from 125 to 375 feet per minute didn't make any difference as far as the wire marks were concerned.

Best wire and felt life was experienced in running test liner with neutral pH—or just slightly on the alkaline side—one observer reported, while another indicated running from 9.5 to 10 pH in vats on test liner with no indication of increased damage to wire or felts. This high pH, of course, was to produce a higher Mullen test.

The consensus seemed to be that only small content nylon felts could be used satisfactorily in running board because of its effect on the felt filling up.

On vacuums carried on felts, the experience ran all the way from one operator who carried none, to one who carried 14-inches. It was determined that the type of board being run required different vacuums. One superintendent said that he carried a 10-12-in. vacuum on the sheet and 5-in. on the felts because of the different demands of the two.

On sheet marking, the opinion was expressed that felt marks can be minimized by running high moisture content from the driers through the smoothing rolls, but that wire marks are in the sheet to stay and can't be so removed.

One of the liveliest discussions took place over the causes of felt hairs in the sheets. One operator said it was seasonal in his plant with August and September being the months of greatest difficulty. Another confessed to complete loss as to cause or means of removing the difficulty. Another uses gas flame after driers to burn off hair—another uses rotary brushes. One of the most interesting contributions came from an operator who said that he could put felt hair in the sheet or take it out, just according to the use of his motive drives. With helper drives and synchronization of motors, thus eliminating the abrupt drag on the felt he said it was possible to remove most of the trouble from felt hairs on the sheet. The theory being that the drag raises the felt hairs and causes them to pick off onto the stock.

In felt care in starting up to eliminate blows, one manufacturer uses detergents to get rid of the oils in the new felt, and said that wetting agents are not completely necessary if the oils have been thoroughly removed from the felt followed by washing. Shutting showers off the bottom had some effect in eliminating blows in start-ups. Another found that running felt for 25 to 30 minutes with water turned on before starting stock flow made for a smooth start-up.

Experience on offsetting of couch rolls was so varied as to make a conclusion impossible. One operator reported offsetting first couch at 8" and then increasing up the machine. Another started with couch offset at 7⅞" on No. 1, and then graduating up to 14". The opinion seemed to be that some research on this point would be feasible.

Stock Preparation

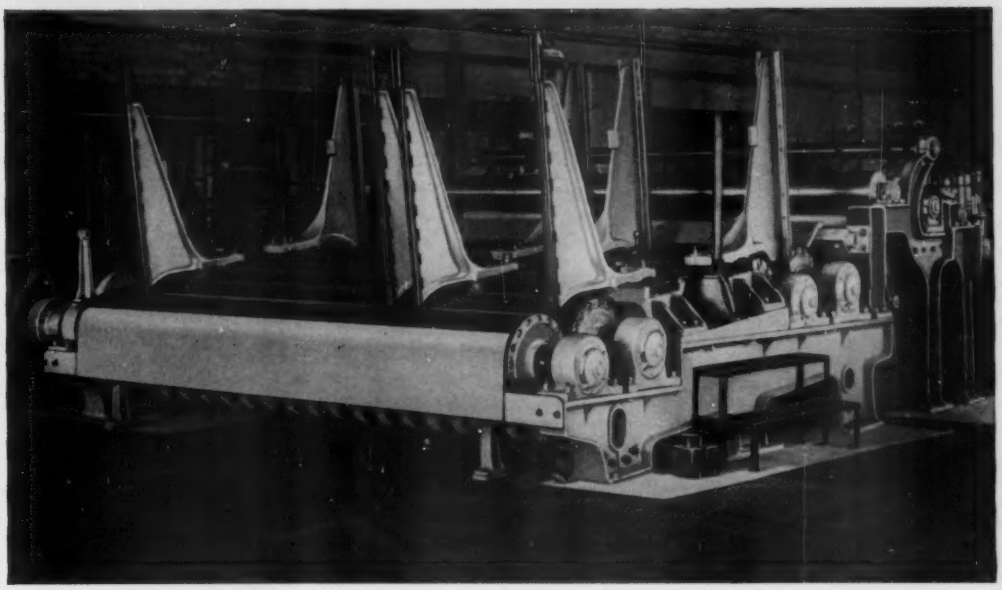
One of the best contributions to the meeting of the board group was the presentation of a paper: "A Practical Approach to Stock Preparation for Paper and Board," by Howard W. Hyman, vice president, The Alexander Fleck Ltd., and Howard P. Espenmiller, senior research engineer, The Black Clawson Co. This paper brought together accumulated experience and information from consideration of the cellulose fiber through the entire stock preparation process. This paper advocated maximum quality control through the separation of the processes of pulping, refining, and jordanning. It said that power consumption for refining or beating should not be reduced since this prohibits full development of the potential worth of the fiber being processed. The system should be so balanced between refining or beating and jordanning that it suits the range of end products to be produced. Mr. Hyman mentioned a new method for the proper evaluation of refining equipment, and this depends upon the "Intimacy Factor" determined from calculations based on the physical characteristics and relative speeds of the component parts of the refiner in question.

An interesting paper was presented on "The Application of the Principle of the Howard



GROUPS AT MONTREAL (l to r): T. W. SMALL of Sprout, Waldron & Co.; J. W. McKINNEY, Abitibi Power & Paper Co.; WM. CONVERSE, also of Sprout, Waldron; ROGER SAMMON, Stein, Hall of Canada; D. A. MORAN, Manager of Deferiet, N. Y. mill of St. Regis; CLIFF FOGARTY, Stein, Hall; C. M. CONNER, Tech. Director, W. C. Hamilton & Sons, Inc., Miquon, Pa.

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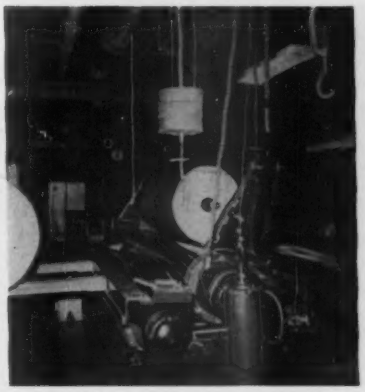
This new Moore & White winder will wind rolls up to 84 inches in diameter. It is available in widths up to the maximum requirements of modern paperboard mills. We can equip it with automatic roll ejectors which permit the completed rolls to be quickly and easily removed from the winder drums without being tended or handled by an overhead crane.

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Above—*Moore & White 4-drum board winder equipped with Moore & White shear-cut slitters*



Above—*Moore & White 4-drum winder equipped with automatic roll ejectors*

CUSTOM-BUILT MACHINES FOR MAKERS OF PAPER AND PAPERBOARD

Smith Creaser to Commercial Operation," by Basil Rogers, Staebler Baker Co., Gananoque, Ont., manufacturers of this equipment. Mr. Rogers mentioned that his firm had conducted numerous tests using multiple creaser rolls and dies to provide a tougher board test for cracking purposes.

L. S. Campbell, Gair Co. of Canada, concluded the board sessions with a talk on "Some Factors Affecting Printability." He reviewed the work to date which had been spent on: (a) Surface oil resistance tests and their relation to gloss ink printing, (b) The variables in printing inks existing in box plant printing machines and the effect of ink temperature on the quantity added to the sheet, and (c) The effect of outside mechanical condition on printability, which he found to take place in a printing press while keeping all sheet and ink properties constant. During the discussion which followed one member stated that the smoothness test was a good yardstick for measuring the adaptability of a board for gloss ink printing. Committee members were informed that a machine for measuring compressibility exists at the present time in a large publishing plant in New York.

Columbia River Mills Starts Hercules Emulsifier

Columbia River Paper Mills, Vancouver, Wash., has installed a Hercules automatic rosin size emulsifier, the first of a new and more compact type that Hercules provides, to be placed in operation in paper mills of the Pacific Northwest. Occupying space but six feet square, it automatically handles up to 30,000 lbs. of 80% solids size in a 24-hour period, delivering 3% solids emulsion directly to beater room.

At this tree paper machine, and one parchment machine plant, rosin size arrives by tank car and is transferred to 25,000-gallon bulk storage tank. The emulsifier unit automatically heats the size, mixes water with it to precise proportions and delivers emulsion to beater room ready for use.

A manually operated batch system of size emulsion preparation had been used. The new unit includes assembled heating tank, size pump, water pump, temperature controls, and water heater as the prime assembly; also cold water feed tank, with float valve, and electrical equipment. Advantages of the automatic emulsifier include small space required, uniform emulsion, minimum labor, less emulsion storage required, and it utilizes low pressure steam.

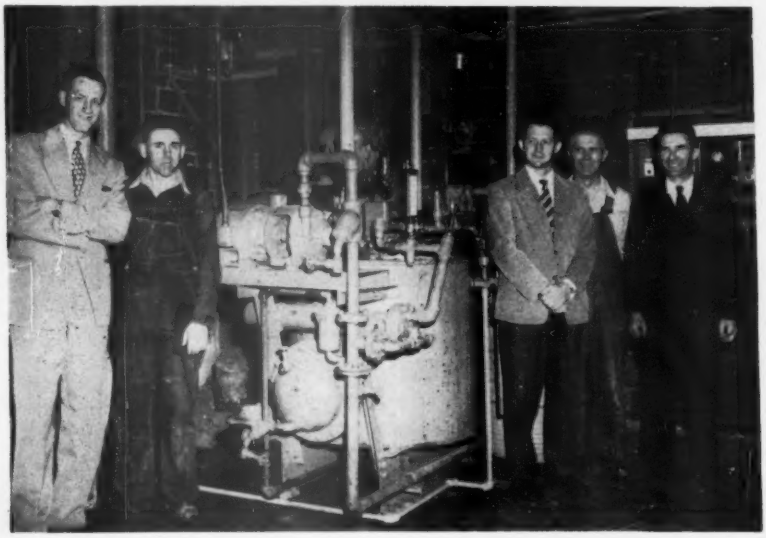
Columbia River Paper Mills Expansion

Construction has begun at Columbia River Paper Mills, Vancouver, Wash., to more than double hog fuel storage capacity and to increase fire-protection water storage by replacing the former storage unit with a new 100,000-gallon tank. The fuel storage unit, to be entirely under roof, will have capacity for 750 units—enough to operate the plant about three days.

CROWN ZELLERBACH CORP., Camas, Wash., is replacing a 3½-ton rotary digester in the kraft mill with a 10-ton A. O. Smith stationary digester. According to L. D. McGlothlin, sulfate mill superintendent, the rotary digester was taken out, after nearly 15 years operation, as a normal replacement. The new stationary digester, first in this kraft mill, will provide larger capacity in the limited space available. It is to be equipped with full circulating system.

STUDYING PLANS FOR NEW MILL are HAROLD BLANCKE, President, Celanese Corp. of America (standing); GEORGE SCHNEIDER, Vice-President, late D. G. STENSTROM, West Coast Representative, in Vancouver, B.C. A new subsidiary, Celgar Development Co., has been formed to proceed with construction of an unbleached and semi-bleached sulfate mill and newsprint mill at Castlegar, B.C., at a cost of about $65,000,000. Mr. Stenstrom's sudden passing is reported elsewhere.

HERCULES AUTOMATIC ROSIN SIZE EMULSIFIER at Columbia River Paper Mills, Vancouver, Wash. Left to right, H. B. Petersen, Technical Sales Representative of Hercules Powder Co.; Fred Beauchamp, Columbia River's Boss Pipe Fitter; A. M. McGee, Jr., Hercules Technical Service Engineer; Roy Keiser, Beater Room Foreman; E. V. Young, Chief Electrician, the latter two of mill staff.



SERVING INDUSTRY



ANGUS J. GARDNER, (left), who has been appointed Asst. Vice Pres. in charge of Sales, Rice Barton Corp., paper machinery mfgrs. of Worcester, Mass. Mr. Gardner's experience in the industry has been with International Paper Co. and Great Northern Paper Co.

JOE E. HARTFORD (right), Sales Representative for Black-Clawson, born in Plattsmouth, Neb., graduate of Iowa State, was Supt. and Mgr. of U. S. Gypsum plants in Los Angeles, Kansas City and Jersey City until a few years ago. Has three brothers in mills.

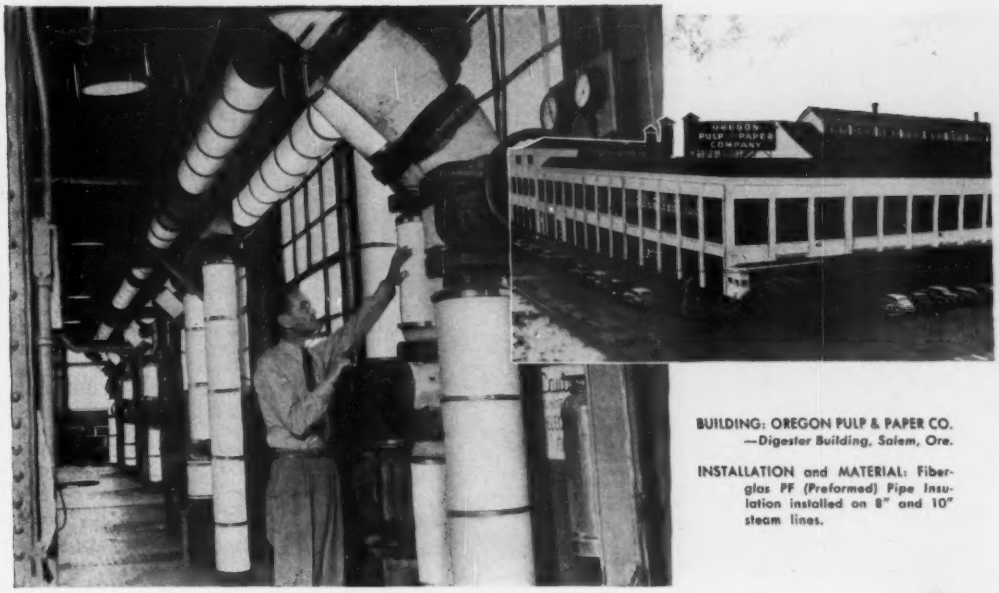


H. & W. Mill Still Is Safety Champion

The Hollingsworth & Whitney Co.'s mill at Waterville, Maine, can rest assured that its overall all-time record for safety for all types of pulp and paper mills will remain unchallenged for a while longer. Its record is 3,343,598 man-hours without a lost time accident.

The Kimberly-Clark Corp. mill of Kimberly, Wis., was breathing on the necks of the Maine staters when an accident on Jan. 19 ended its recent phenomenal record at 2,964,000 hours. This had been compiled in a 330-day streak, and the Kimberly mill had only 27 days to go to catch up with the Maine record set in 1948. As it was, Kimberly holds the record for National Safety Council Class A mill, breaking a record of 2,612,656 set by Longview Fibre Co., Longview, Wash.

A woodroom employee fractured and lacerated a fourth left hand finger in a fall at the mill, but lost no time until complications required an amputation.



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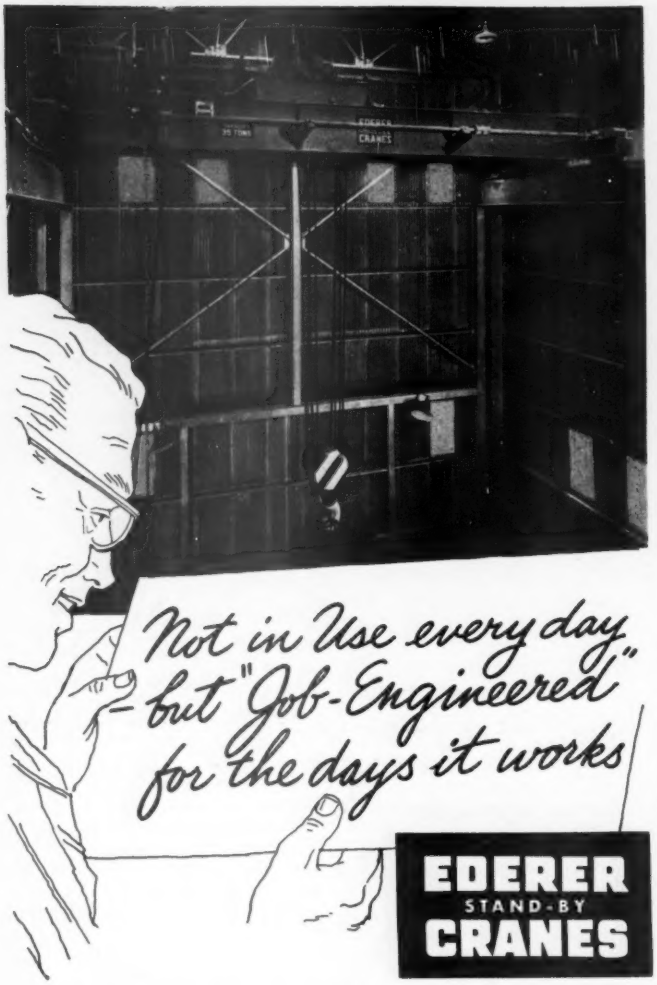
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Wisconsin Liquor Plant Deadlines Are Extended

Wisconsin's state committee on water pollution has granted an extension to Dec. 31 of the deadline for completion of the sulfite liquor evaporating and burning plants projected by Consolidated Water Power & Paper Co. at its Appleton, Wis. (Interlake) mill and by Hoberg Paper Mills at Green Bay, Wis. Previously Northern Paper Mills at Green Bay had been granted an extension to Dec. 31.

All were granted because of delays in obtaining stainless steel for their Rosenblad-switch type evaporators being built by General American Transportation Corp.

Henry Baldwin and Richard Brazeau, representing Consolidated, told the committee Consolidated also would request an extension beyond the May 31 deadline set for the Wisconsin Rapids sulfite mill because it was questionable whether the same type of equipment would be suitable there. The reason for this doubt was that a change from calcium to ammonia base cooking was being tested at that mill.

Big Brompton Mills Expansion Program

E. and B. Cowan, Montreal, have been engaged as consulting engineers for Brompton Pulp & Paper Co.'s extensive expansion at East Angus, Que., and Red Rock, Ont.

Only in a few cases has the choice of equipment been made, the company informs PULP & PAPER. Three digesters and a blow tank for East Angus are to be supplied by Dominion Bridge Co. and four Morden Stock-Makers are to be provided by William Kennedy & Sons.

A total expenditure of $21,500,000 is contemplated by Brompton. The East Angus capacity is to be increased from 75,000 to 84,000 tons annually. Plans for Red Rock call for a total daily production of 485 tons of paperboard and 200 tons of newsprint utilizing all pulp.

Some of the changes planned:

Red Rock—hot stock refining system, additional digester, increase washing and evaporator and a 55 ton semi-chemical plant using hardwood; addition of four super-grinders, conversion of 234 inch machine now producing board to newsprint; new steam plant, etc.

East Angus—Replacement of eight small digesters by four eight-ton digesters with new blow tank; extension of blow steam hot water recovery, six-effect evaporator, new screening, lime kiln, electrical precipitator; new 120 inch trim high speed kraft paper machine to replace two small machines, stock preparation, modernization of woodyard and woodroom.

MACHINE TENDER Munchausen Stories



IVOR D. ISAACSON, of Los Angeles, V.P. of Pulp, Sulfite union, who is this month's storyteller.

For our Machinetender Munchausen tale this month we bring our readers one that was passed on to us by Ivor D. Isaacson, of Los Angeles, vice president of the International Brotherhood of Pulp, Sulfite and Paper Mill Workers, AFL, and a longtime veteran of the Pacific Coast industry. Mr. Isaacson was employed for 23 years at the Inland Empire Paper Co. of Spokane, Wash., before he advanced into the higher echelon in union work.

For anyone who contributes an accepted story to this column, PULP & PAPER is very happy to pay $5. Like the Baron Munchausen stories of old, Machinetender Munchausen stories are not necessarily even remotely connected with the facts of life in the pulp and paper mills.

Here is Mr. Isaacson's story:

"This is an experience that happened to an old timer in one of our mills, now long since retired, but who was working out his later years in the service as gateman at this particular mill.

"Late one day when the shift went off work, one of the crew came up to the gate pushing a wheelbarrow and it was piled high with wood shavings.

"The gateman had been told to keep an eye out for anyone who might be tempted to smuggle out any tools or equipment, and so he stopped the fellow with barrow and he dug down in the shavings but he couldn't find a thing hidden in them. So he let the fellow through.

"The same thing happened for several nights, and he never could find anything in the wheelbarrow, although every time he stopped the fellow and made a thorough search. The fellow with the barrow would act dumb or aggrieved, but he didn't complain too much and he was always sent on his way, apparently cleared of any suspicion.

"But the gateman was never quite satisfied. It wasn't long however, before the man with the barrow quit his job and was planning to leave town. The gateman was so curious about what had been happening that he walked over to the departing worker's home that evening, and said:

" 'Now that you are leaving us, how about coming clean and telling me what the dickens you were smuggling out of the plant.'

"The answer was: 'Why, just wheelbarrows!' "

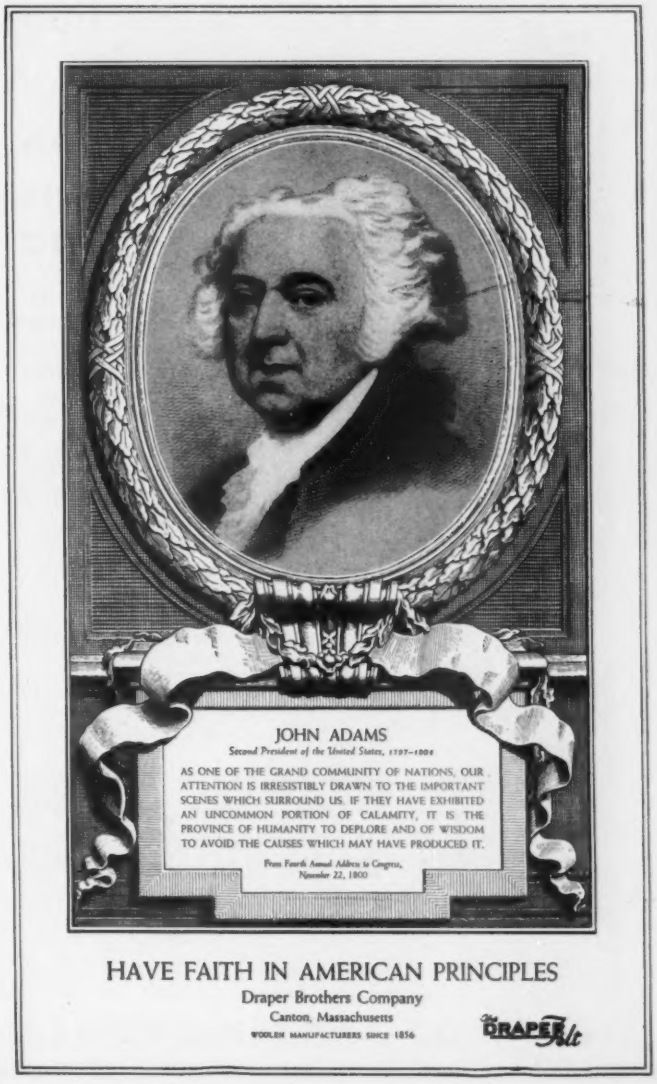
Testing New Evaporator

In search of a more practical way to evaporate excess water out of spent sulfite liquor, Consolidated Water Power & Paper Co. is testing equipment originally designed for making drinking water out of sea water for Navy ships in a pilot plant at Wisconsin Rapids. Consolidated is working with Cleaver-Brooks Co., Milwaukee, to test a vapor compression evaporator.

New Mill for West

Western Plywood Co., headed by Hungarian-born John Bene, which has been operating at Vancouver, B.C., several years, plans a bleached kraft pulp mill at Quesnel, B.C., in connection with plywood and lumber operations there. Construction, at estimated cost of $20,000,000, will proceed as soon as negotiations with the government for an enlarged forest management license are completed. Since the government itself announced the project it is anticipated that there will be little delay.

Discussing plans with PULP & PAPER, Mr. Bene intimated the project might be undertaken in partnership with another company already in pulp. "What we aim to have is a fully integrated operation making maximum use of the wood available in the Cariboo district of British Columbia," said Mr. Bene.



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Rayon-Acetate Record Production In 1951

United States rayon and acetate production, some three-fourths of it made with woodpulp as raw material, set an all-time record of 1,294,200,000 lbs. in 1951, according to *Textile Organon*. Rayon increased 6% over 1950, but acetate was down 3½%. Total U. S. production is over three times what it was in 1939.

World production was estimated at 3,960,000,000 lbs. in 1951, 13% above 1950, previous record year.

Long Planned Mill For B.C. Announced

A kraft pulp mill which has been planned for several years is finally announced as a definite $20,000,000 project for eastern British Columbia by Walter M. Leuthold, of Spokane, Wash. A pioneer lumberman of eastern Washington and eastern B.C., the company he heads has long considered making better use of its Englemann's spruce and pine holdings by building a pulp mill in conjunction with sawmill operations at Nelson, B.C.

Mr. Leuthold heads a newly formed Kootenay Forest Products Ltd., planning a 200 ton mill utilizing wood from a 400,000 acre tract.

R. V. Stuart, for many years secretary of the B.C. Loggers Association and until recently head of Forest Industrial Relations, Ltd., which he founded in Vancouver, is a director of the new company. John H. Leuthold, son of W. M., is vice president. Other directors include James Hickey, Deer Park, Wash., lumberman. W. J. Shukin of Nelson is secretary. C. D. Schultz & Co. of Vancouver and Seattle are consulting foresteers for the company.

Corrosion Engineers' 1952 Meeting Plans

The 1952 annual conference of the National Association of Corrosion Engineers will be held at Galveston, Texas, March 10-14, 1952. Exhibits and meetings will be on the Galveston Pleasure Pier. The Buccaneer Hotel will be convention headquarters. Eight technical symposia, a general corrosion session and two round table or panel discussion sessions are scheduled.

Robt. Gair Acquires American Coating Mills

George E. Dyke, president, Robert Gair Co., Inc., and *J. P. Levis*, chairman of Owens-Illinois Glass Co., have announced that Robert Gair has acquired paperboard mills at Elkhart, Inc., Middletown, O., and carton plants at Elkhart, Chicago and Grand Rapids, Mich., for which O-I received 400,000 shares of Gair common stock in addition to "substantial" cash. The mills involved formerly operated as O-I's American Coating Mills division.

St. Helens Kraft Mill's New Equipment

St. Helens Pulp & Paper Co.'s three year modernization-expansion program at St. Helens, Ore., is progressing on schedule, according to Max R. Oberdorfer, executive vice president and general manager. The brown stock system was to start operation around Jan. 1. Late this spring the 4-stage 250-ton per day bleachery goes into production.

Two high density storage chests, each 200 ton capacity, have been completed and are considered currently the largest in this country. These 36 ft. diameter by 65 ft. high chests were built of concrete by slip-forming to store brown stock at 18% consistency. Each is equipped with IMPCO agitation and high pressure dilution equipment.

Other brown stock and bleach facilities include: Three IMPCO brown stock washers, each 8 ft. diameter by 16 ft. face, with provision made for subsequent addition of a fourth stage; three vibratory IMPCO deknotters; IMPCO mechanical foam breaker; American Pipe & Construction Co. blow tank; digester blow heat recovery system designed by J. P. Rubush, of Wenatchee, Wash., and built by Hydraulic Supply Mfg. Co., Seattle; stock and liquor pumps by Bingham, Ingersoll-Rand, DeLaval, and Allis Chalmers; four American Pipe & Construction steel circulator type towers with IMPCO circulators; mixers above 2nd, 3rd, 4th stage high density towers, and dilution arrangement by IMPCO; entire instrumentation by Brown Division of Minneapolis-Honeywell; washer hood, chlorination washer, motor control centers, DC motors and operating area of building, equipped with Drew Engineering Co. ventilation.

Chemical Linings, Inc., Watertown, N.Y., tilework is provided in brown stock high density storage towers, existing chests, seal boxes in bleachery, and the four bleach washer vats.

Screen Room: 6 Lindblad type screens by IMPCO will be used in conjunction with existing Ray Smythe flat screens.

Recovery plant equipment on order: Combustion Engineering recovery unit for 875,000 lbs. of black liquor solids per 24 hours; multiple effect black liquor evaporation designed by J. P. Rubush, built by Hydraulic Supply Mfg. Co., and equipped with Tabor black liquor pumps; Koppers-Elex electrostatic precipitator manufactured by Metal Products Div., Koppers Co.; Dorr Co. causticizing and white liquor clarifying equipment including a No. 8 Dorrco lime slacker, 35 ft. diameter type ATB Dorrco tray thickener for clarifying white liquor, a 28 ft. diameter type ATB Dorrco tray thickener for lime and mud washing, and two No. 4 diaphragm Dorrco pumps; General Electric motors, electric distribution system, transformers and aerial cable.



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Less Pulp Came From Europe in 1951

The U. S. imported almost exactly the same amount of woodpulp in 1951 as it did in 1950—2,375,330 tons in 1951 as compared with 2,385,181 (preliminary census figures). However, the portion that came from Europe fell off from 28% to 20%, while Canadian shipments increased from 72% to 80%.

Canadian pulp imported totaled 1,892,529 tons in 1951, up 10% from 1,717,035. Swedish shipments were only 257,061 tons, down 36% from 398,814. Finland's shipments were 182,616, down 11%. There were increases from Norway and Germany, decreases from other countries, but small in tonnage, and total European imports were 482,801 tons, down 28% from 668,146.

1,754 Tons in One Day

Record for paper production at Union Bag & Paper Corp., Savannah, Ga., was set Dec. 18 when this mill made 1,754 tons in a 24-hr. day. The old record was 1,614 tons made Apr. 16, 1951. The December average of 1,386 also was a record monthly average. The bag division also set a record for the month, averaging 938 tons.

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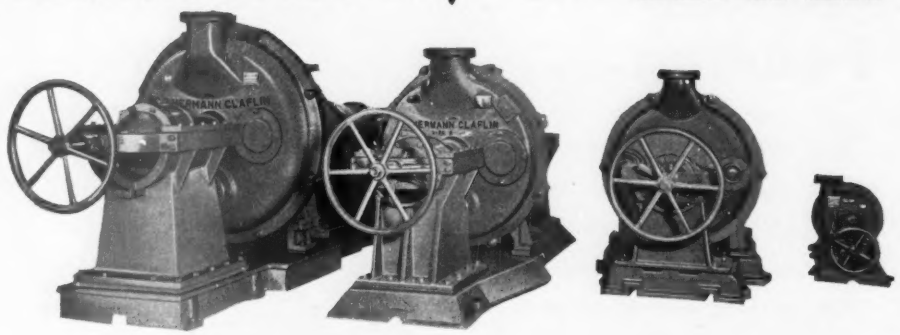
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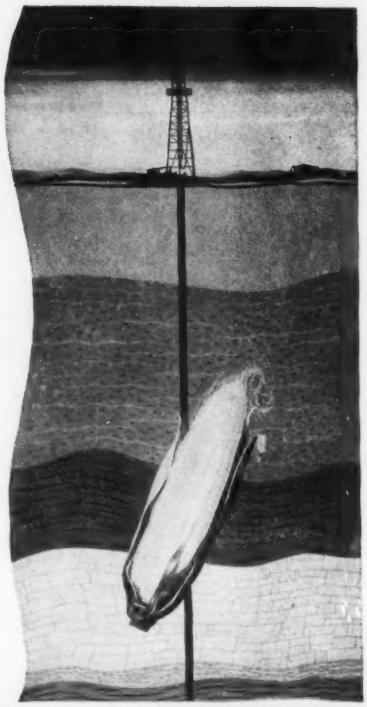
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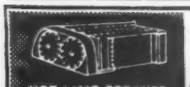
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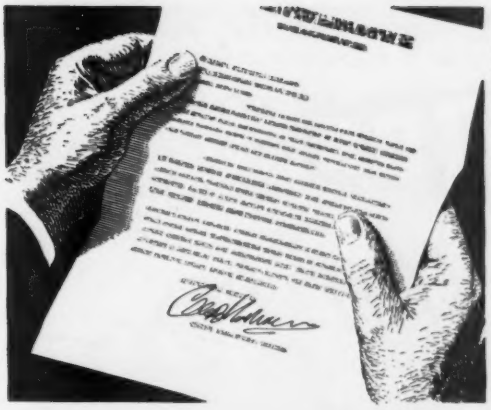

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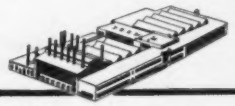
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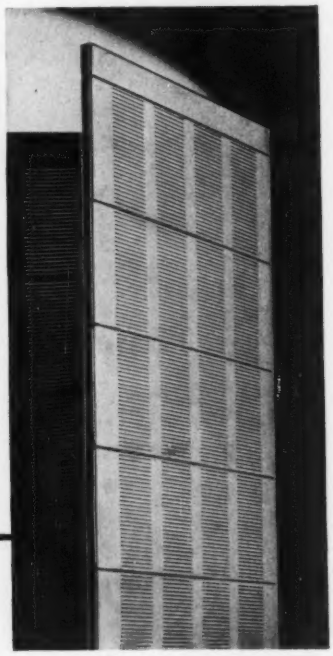
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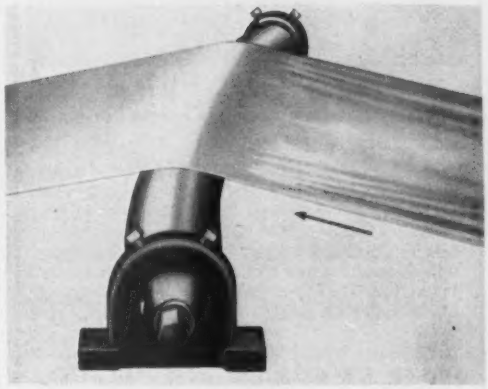
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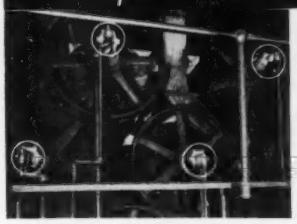
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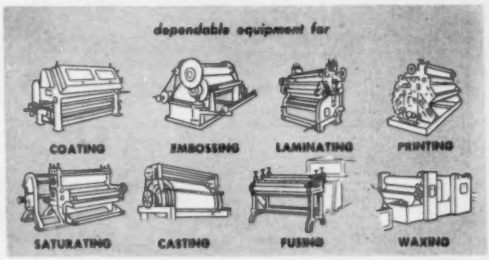
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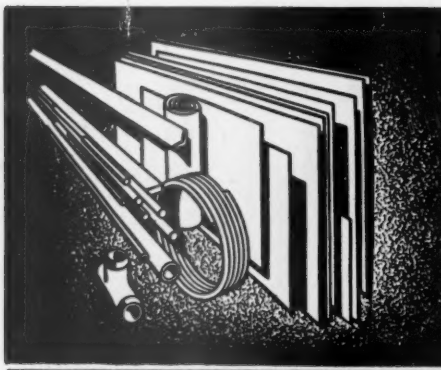
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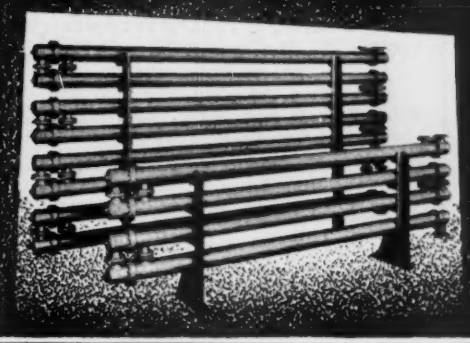
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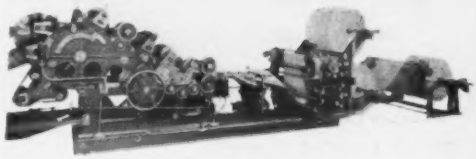
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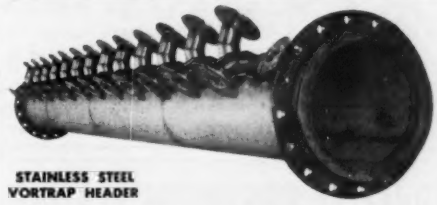
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FIRMS YOU SHOULD KNOW

Advertising Index

Adams Co., R. P. 38
Alaskan Copper & Brass Co. 114
Alaskan Copper Works 115
Allis Co., The Louis Inside Back Cover
Allis Chalmers Mfg. Co. 5
American Cyanamid Co., Industrial Chemical Division 12
American Potash & Chemical Corp. 112
Anheuser-Busch, Inc., Corn Products Division 26
Appleton Woolen Mills 115

Babcock & Wilcox Co. 14
Bagley & Sewall Co. 79
Bearing Sales & Service, Inc. 102
Beloit Iron Works 49
Bingham Pump Co. 6
Bird Machine Co. 45
Black-Clawson Co. Divisions: Shartle Bros. Machine Co.; Dilts Machine Works; Kohler System 39
Bristol Company 4
Brown Company 37
Brown-Hutchinson Iron Works ... 115
Bulkley, Dunton Organization ... 65
Bulkley, Dunton Pulp Co. 107
Butterworth & Sons Co., H. W. ... 109

Cameron Machine Co. 61
Carroll, Bechtel & Langtry 117
Chain Belt Co. 34, 35
Chemipulp Process Inc. 116
Chromium Corp. of America 116
Classified Advertising 104
Clinton Foods, Inc. 110
Corn Products Refining Co. 108
Crane Company 19
Curlator Corp. 59

Dominion Engineering Co., Ltd. . 93
Dorr Company 7
Dow Chemical Co. 109
Downingtown Mfg. Co. 8, 9
Draper Bros. Co. 101

Ederer Engineering Co. 100
Electric Steel Foundry Co. 27
Elliott Company 20
Fabri-Valve Co. of America 111
Foxboro Company 16

General American Transportation Corp., Process Equipment Division 29
General Chemical Div., Allied Chemical & Dye Corp. 25
Goslin-Birmingham Mfg. Co. 105
Gottesman & Company 2
Griffith Rubber Mills 112
Gruendler Crusher & Pulverizer Co. 108
Guest & Sons, C. M. 116

Hansel Engineering Co., Ltd. 117
Heppenstall Company 15
Hermann Mfg. Co. 106
Heyer Sales & Engineering Co. ... 112
Hooker Electrochemical Co. 69
Huyck & Sons Co., F. C. 73

Improved Paper Machinery Corp. 95
Infilco Incorporated 75
Jenssen Co., Inc., G. D. 116
Johns-Manville Corp. 33
Johnsen, Jorgensen & Wettre, Ltd. 71
Johnson Corp. 112
Johnson & Co., Alvin H. 116
Jones & Sons Co., E. D. 47

Knox Woolen Co. 118
Kohler System 39

Link-Belt Company ..... 23 & 91
Lodding Engineering Corp. 89
Lyddon & Company, Inc. 36

Magnus Metals Corp. 110
Main, Inc., Chas. T. 117
Mason-Neilan Regulator Co. ... 80, 81
Mead Sales Co. 10
Merrick Scale Mfg. Co. 116
Metcalf & Harstad Associates 117
Midwest Fulton Machine Co. 1
Moore & White Co. 97
Mount Hope Machinery Co. 111
Murray Mfg. Co., D. J. 105

Nash Engineering Co. 103
National Aluminate Corp. 21
Noble & Wood Machine Co. 57
Northwest Copper Works 113
Northwest Filter Co. 116

O'Donoghue, Roderick 116
Ohio Knife Co. .... Inside Front Cover
Oliver United Filters, Inc. 62, 63
Owen Bucket Co. 115
Owens-Corning Fiberglas Corp. .. 99

Pacific Coast Supply Co. 104
Pacific Gear Works 17
Pacific Gear & Tool Works 17
Parsons & Whittemore, Inc. 36
Perkins-Goodwin Co. Outside Back Cover
Pfeifer & Schultz 116
Powell Co., Wm. 30
Powell River Sales Co. 18
Puget Sound Pulp & Timber Co. .. 24
Pulp Bleaching Co. 117
Pusey & Jones Corp. 52

Rambo, W. H. 117
Reliance Electric & Engineering Co. 77
Rice Barton Corp. 13
Robert & Co. Associates 117
Roehlen Engraving Works 116
Roslund, John V. 106
Rust Engineering Co. 117

Sandwell & Co. 117
Saran Lined Pipe Co. 109
Schultz, C. D. 104
Shartle Bros. Machine Co. 39
Shuler & Benninghofen 107
Simonds Saw & Steel Co. 31
Sirrine Co., J. E. 116
Smythe, Ray 117
Sprout, Waldron & Co. 51
Stadler, Hurter & Co. 117
Stevenson & Rubens 117
Stone & Webster Engineering Corp. 28
Sumner Iron Works 85
Sutherland Refiner Corp. 11
Swenson Evaporator Co. Div. Whiting Corp. 76

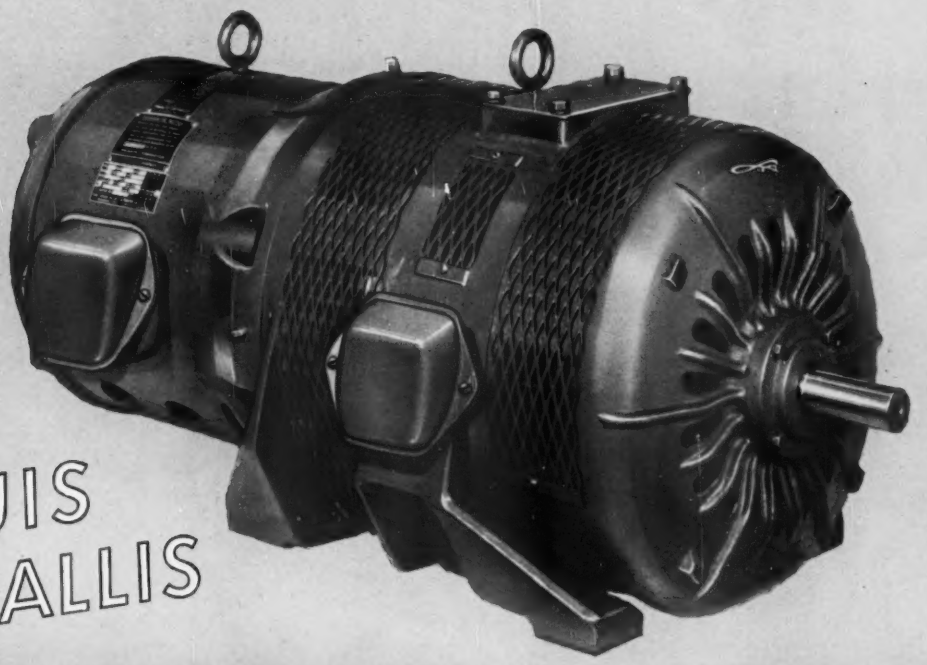
Takahashi & Co., C. T. 113
Tennessee Corp. 114
Thew Shovel Co. 87
Thomas & Associates, Inc., Ralph D. 117

Valley Iron Works 55

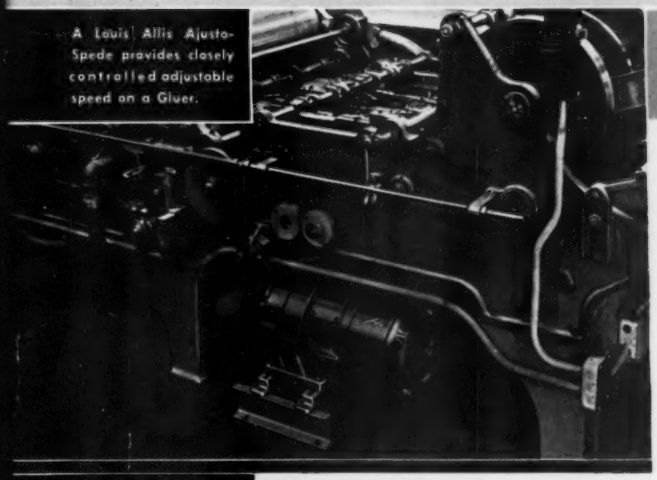
Waldron Corp., John 113
Warren Steam Pump Co. 67
Weber & Co., H. G. 115
Western Gear Works 17
Weyerhaeuser Timber Co. 32

Yarnall-Waring Co. 22

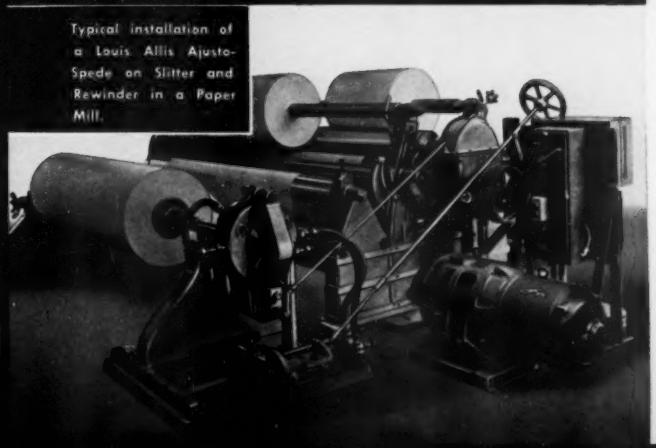
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